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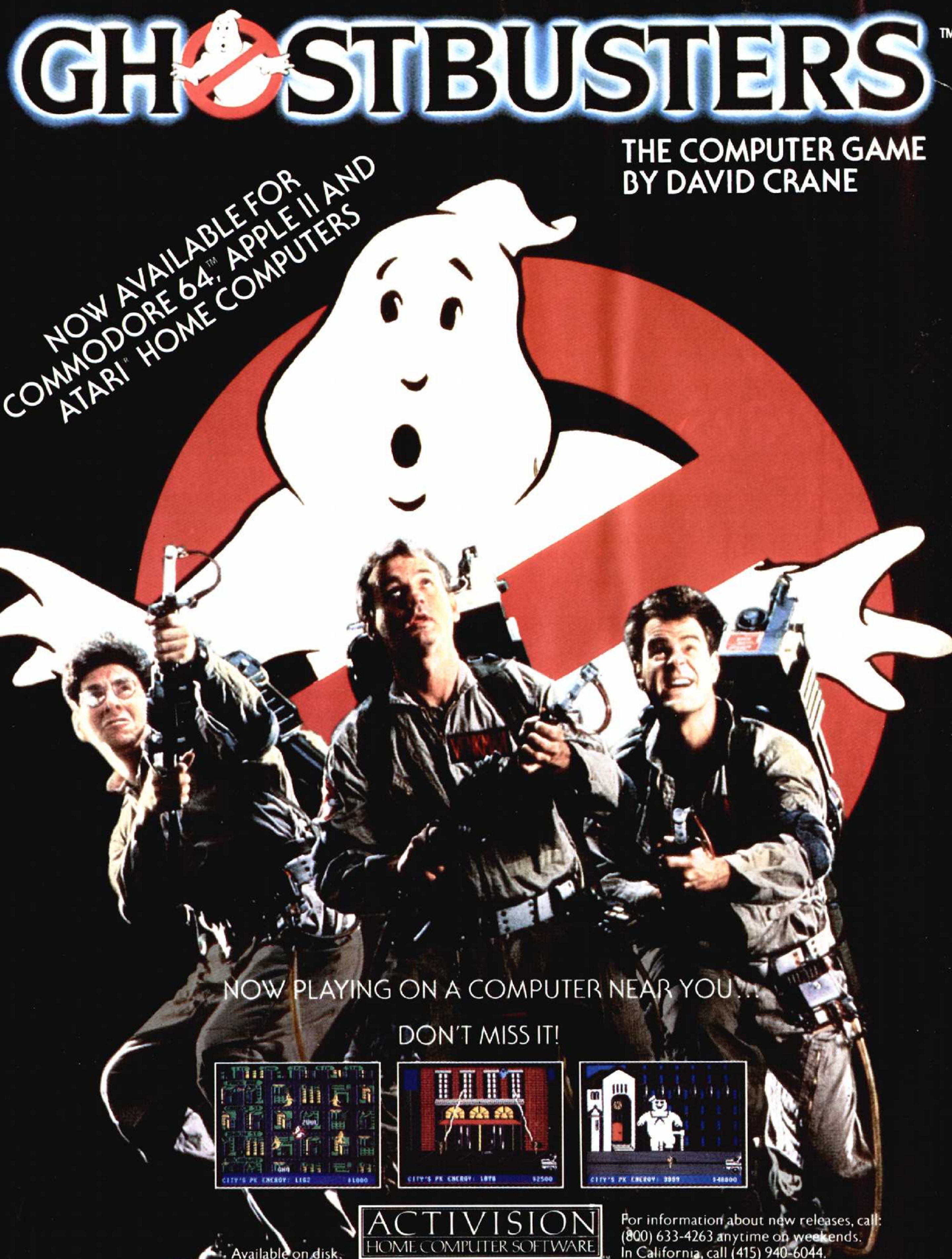
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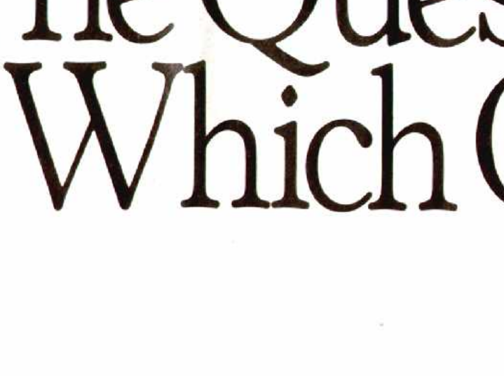

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**Cover photography:**
*Tom Weihs*

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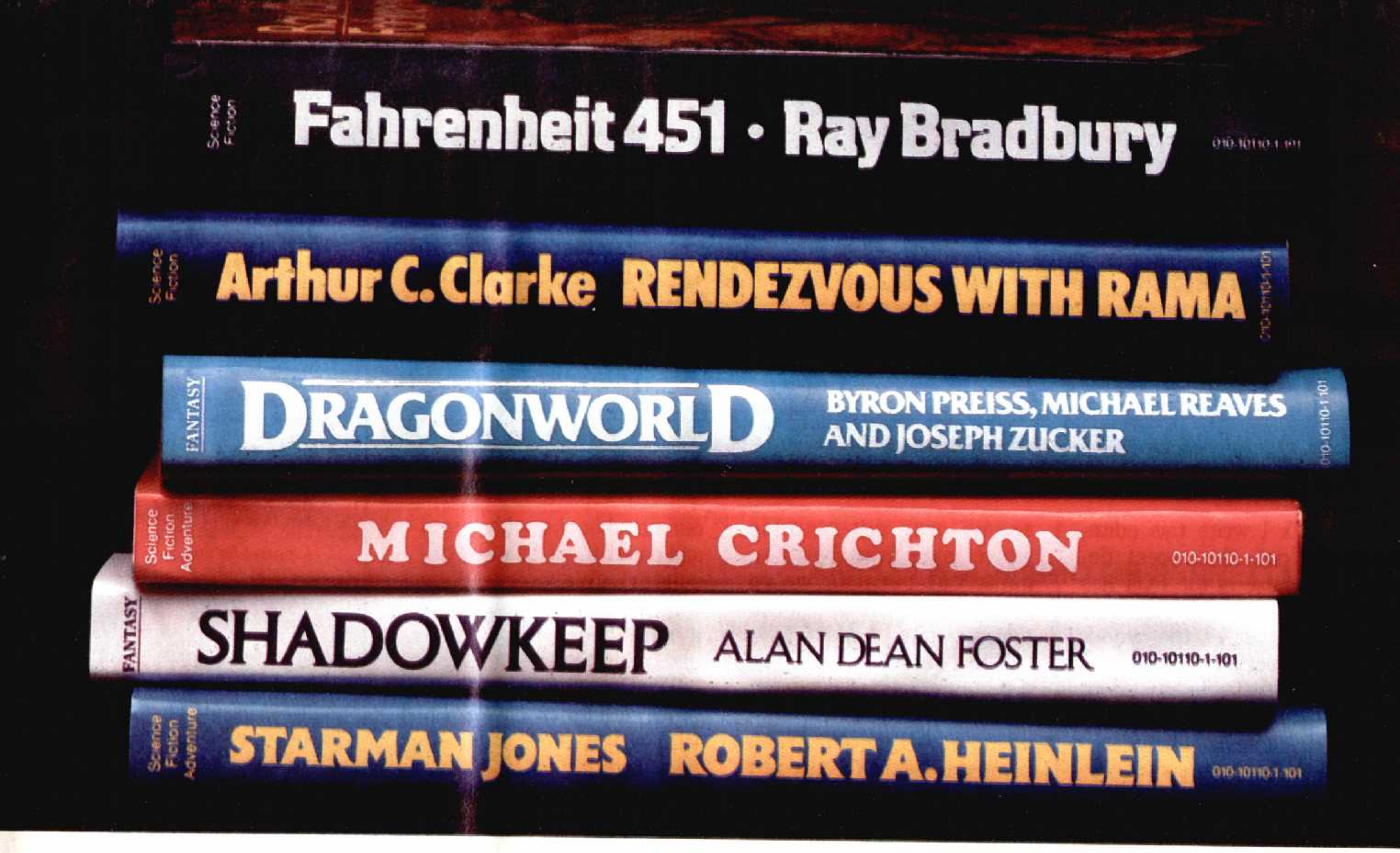
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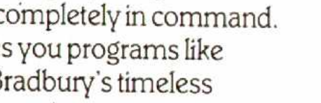
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# On-Line

## From Boom to Normalcy?

As I write this editorial, the recent demise of the PCjr has brought all the industry Cassandras out of the woodwork. Everyone, it seems, has something to say about the implications of IBM's decision. And what is being said has, almost without exception, an ominous sound to it. Doomsayers can always find another case in point to support their arguments. It doesn't necessarily follow, however, that their arguments are valid.

The truth is, the PCjr has never really been a contender. It has been plagued with problems since it first appeared on the market; starting with its inadequate keyboard and unrealistic price, but certainly not stopping there. People who wanted IBM quality and power have tended to go for the PC senior; those in the market for less expensive and powerful computers have generally opted for a Commodore, Apple or — at least until recently — Atari.

If you believe what you read in the papers or computer magazines, another nail goes into the coffin every time a company goes out of business or drops a product — and this is not an inconsistent way of looking at things. On the other hand, what's wrong with a more optimistic outlook? Maybe companies fail because they're not producing what the public wants; maybe products are withdrawn because they're just bad products. Maybe the outlook seems gray not because we've gone from boom to bust, but because we've gone from boom to a more realistic state of affairs.

The reason for all these dismal predictions is rooted in the beginnings of the computer industry itself. When computers were the size of a city block and required highly trained technicians to run them, the pundits were predicting that home computers were a pipe dream. Computers would never be small enough, they said, nor accessible to the untrained user. And even if a small, easy-to-use computer were to be developed, it would cost so much that only a favored few would be able to buy one. When the critics were dramatically proved wrong on all counts, their tone changed from snipe to hype.

This hype touted the advent of home computers as the dawn of a new age. Computers were going to radically change our lives; they were going to do everything except wash windows and walk the dog. And who knew? Maybe eventually they'd be able to do that, too — in between taking over every other onerous chore and turning all our children into geniuses.

These extreme positions have at least two things in common: neither is true and neither does any good. Now that we have met the future of personal computers, that glowing optimism has come back to haunt us. The fact is, most of us are still balancing our checkbooks with pencil and paper (or with a $10 calculator). We've got dirty windows, a dog to walk, and a relatively expensive electronic miracle sitting on our desks. And the problem is not with the computer, but with what we were led to expect from it.

More home computers are used for entertainment than for any other purpose. What's wrong with that? Nothing, except that we all feel a little guilty about it. Computers, after all, were meant for more high-minded purposes, like doing taxes and spreadsheets, and saving recipes.

Why can't we look at our home computers as the same kind of luxury entertainment device as a TV or a VCR? Any of these can have "serious" uses, but no one gets up in arms if you watch *Cheers* rather than PBS. Or if you record the soaps instead of *The Ascent of Man*. And as for walking dogs and all that, who ever expected the TV to do more than sit there until needed? And computers do have at least one advantage over most other electronic devices: When you talk back to them, they actually listen.

As for the more prosaic uses of computers, it won't hurt to admit that most of them are entertaining, too. Whether you boot up the machine for word processing or *Wizardry*, chances are you're going to have a pretty good time.

*—Louise Kohl*

computer entertainment

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**June, 1985**

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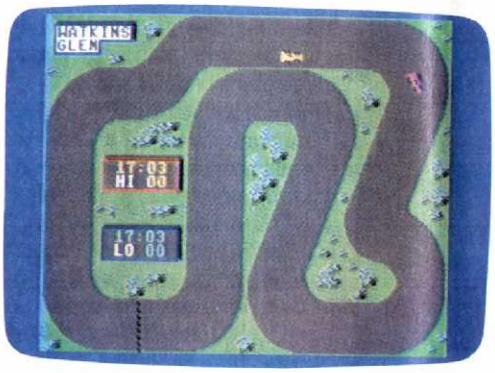

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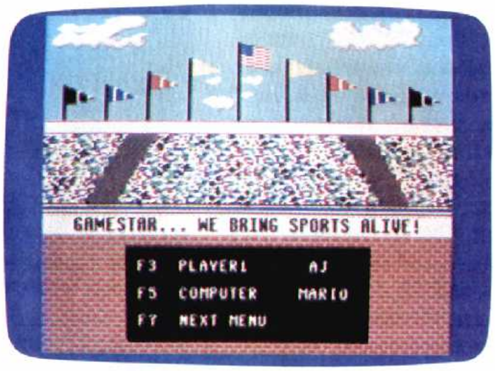

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# Bulletin Board

## Notes from the Neighborhood

### BUSHNELL'S PET PROJECT

"I've had a Petster in my office for about four months, and I've really gotten used to it," says Atari-founder-turned-electronic-pet-entrepreneur Nolan Bushnell. "And I like it. It's kind of soothing or reassuring or whatever to work late and have this little critter running around just like a dog or a cat."

Has Bushnell, one of Silicon Valley's favorite sons, finally cracked up? Or are Petsters, his line of robotic pets (the company name is Axlon) that drew crowds at the recent Toy Fair in New York, just a logical progression for the man who made video games household words? "Nobody needs a robot," barks Bushnell, who first entered the robot business with Androbot. "I have never been in the business of needs. I've been in the business of wants."

Bushnell believes people want pets that don't have to be trained, fed, cleaned up after, and constantly cared for. With absolute seriousness, he says: "Only 40 percent of U.S. households have pets, and I understand that the demand is for at least 60 percent — so there's a 20 percent market that hasn't been filled.

"Right now, in the electronic pet business," he adds, "I've got 100 percent market share, and I like it."

Nine years ago, when Bushnell was still presiding over Atari, robots were being designed in the labs. ("That was part of Atari's business plan," he says.) He left Atari in 1979 to manage Pizza Time Theatre, a venture that thrived for a few years before going broke in 1983. In the meanwhile, he was laying the groundwork for Androbot, Axlon and a number of other start-ups.

Nolan Bushnell hyping his latest venture, electronic pets: "In this stage of technology, it's just a lot easier to make a cat or a dog."

Under the umbrella company, Catalyst Technologies, Androbot promised several personal robots — Topo, B.O.B., Fred — but never delivered and was subsequently sold off.

"We were aiming at a very sophisticated machine," Bushnell explains. "We felt that through mass-production techniques we could get the cost down. But we found out that promise versus the actuality is very, very different. You can't expect that kind of functionality from robots in this stage of technology. It's just a lot easier to make a cat or a dog."

One of the things Bushnell likes to do with his Catster is play golf. "Here's the cat, and here's the hole," he describes. "You set in a program — eight inches, turn right, go forward — to see if you can get it home. It's actually fun. The average living room is about a par three."

But if you have actual pets that prowl the living room, you might run into a problem. Explains Bushnell: "Some dogs and cats love to play with them; others are very threatened and hostile towards them. It's very unpredictable. I have some relatively big dogs. Four of them [he has six, including two Rhodesian Ridgebacks] like [the Catster] — are kind of curious about it — and the rest of them give it wide berth. We haven't been able to keep cats 'cause the dogs kill them. But they generally do their dirty work at night, so I never let the Catster out at night," he smirks.

Bushnell predicts that "in the next five years, robots will become relatively commonplace, will be much more entertaining and more companion-like," but contends that "they will still not be very functional.

"What I'll be doing is making the pets smarter and smarter. As evolution takes hold, we may even get to Bo Derek — you know, that dream we have about the completely servile robot that looks like Bo Derek? Good personality. . ."

And not exactly intellectual. "Actually, from what I hear, that's a public persona. She does all her scripting on a computer. It could make an interesting story for you."

Not to mention a great excuse to call her. "Exactly," Bushnell replies.

### PHASING OUT PIRACY

Interphase Technologies is daring software pirates to crack its new copy protection scheme. "If you have a $30,000 logic analyzer and a couple of weeks to kill," says company president Steve Willey, "you might be able to do it. But most hackers will find it too time-consuming."

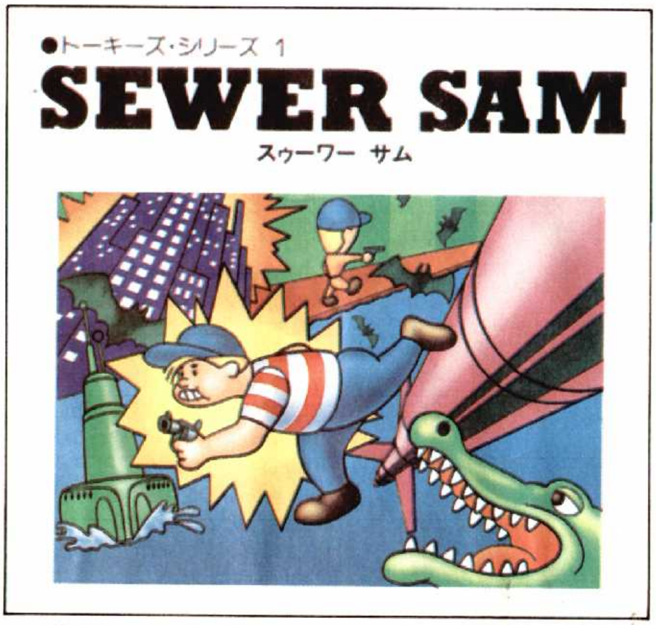
Willey is going head-to-head with hackers who, he contends, are responsible for the decline in software sales both in the U.S. and Canada. "Stores order one or two copies of a program and then, suddenly, every kid on that block has a copy of that program," Willey explains. "It's gotten out of control."

Interphase has been offering its Interlock scheme to software companies who sell either Commodore 64 or MSX products. "Either they can send us the master disk and we'll apply the protection routines by adding or subtracting information on the disk or we can send them the protection disk if they'd rather not let their masters out. Three companies have agreed in principle. They all said if they can't crack the code, then we've got a deal.

"Most software publishers don't think developing copy protections is their business," Willey adds. "So we decided to make it part of our business."

Interphase also designs and manufactures software — *Sewer Sam, Squish 'em Sam, Blockade Runner, Aquattack* — for the C-64, ColecoVision, Intellivision and MSX computers. "We expect the MSX to be a real market, not just a niche market like Intellivision," he says. (Interphase does Intellivision business in Europe and South America and MSX business in Great Britain and Japan.) "We have two people in Japan who are working very closely with Toshiba and some of the other companies. As they say, don't ever underestimate Japan."

Willey warns that hackers shouldn't underestimate Interphase either. "We defy any hacker to release the protection scheme." Your move.


●トーキーズ・シリーズ 1
SEWER SAM
スゥーワー サム

**"Don't ever underestimate Japan," warns Interphase's Willey.**

## BIG FIVE STRIKES BACK

We'd just about given up Bounty Bob for dead. Two years ago, Big Five Software's *Miner 2049er* was the talk of the video game world, but not a word had been heard about Bob (the game's main character) since. Had his nemesis Yukon Yohan finally deposited him at the bottom of a mine shaft? Had Nuclear Ned blown the whole mountain to smithereens? Then a notice arrived late last December telling that Bounty Bob would "ride again" in Micro Fun's *Miner 2049er II* and, more recently, Big Five released *Bounty Bob Strikes Back.* Suddenly, our second-favorite Royal Canadian Mountie (Dudley Do-Right, of course, is the first) had returned on the computer gaming scene with a vengeance. Where had bearded Bob been?

Says Big Five's Ted Witberg: "We do things our own way, which doesn't always mean the fastest way. Bill Hogue [the two games' designer and Big Five founder] takes his sweet time. We just won't get into the five-games-a-month garbage syndrome."

*Miner* was originally written for Atari computers by Big Five, who then sold Micro Fun the rights to convert it for Apple and IBM computers as well as ColecoVision. (Reston did the Commodore 64 version.) Hogue never completed the original sequel, *Scraper Caper* ("He dropped it without telling anybody," says Witberg, "including me."), and began a hiatus that ended sometime last year. Apparently, Hogue kept Micro Fun guessing too, prompting the company to assign designer Mike Livesay the task of following up *Miner.* "Bill took years and years to come up with the sequel," explains Micro Fun's Susan Goldberg. "We needed him to come up with something sooner."

*Bounty Bob Strikes Back* is stored on a 40K ROM cartridge and can only be played on Atari computers. (Surprisingly, a 5200 version will be released soon.) "We just don't want it to be ripped off," Witberg says in defense of Big Five's no-disk, no-risk policy.

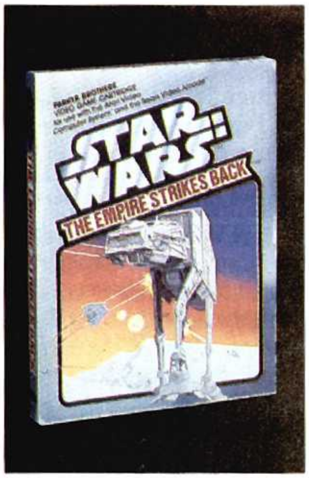
About Micro Fun's *2049er II,* Witberg would only say, "It's not up to our standards. The question is: Do you want to drive a Cadillac or a Honda?" Bounty Bob would probably opt for a Mustang.

## SOFT TALK

Infocom's next experiment in interactive fiction is *Wishbringer,* a fantasy that evolves from routine life to one of altered reality where the Evil One plays games with your head. You must find the Wishbringer

# Bulletin Board

## Notes from the Neighborhood



Free-for-all: Parker Brothers is literally giving cartridges away.

stone and can use any of seven wishes (an umbrella signifies rain, chocolate means freedom) as you travel through the nightmarish landscape. Brian Moriarity, formerly with *Analog*, is developing the game. It won't be available until the fall. . .

*Alterate Reality* is the title of DataSoft's long-awaited adventure series. The first of seven programs, *The City*, should be on sale by July. You begin on Earth in a city, but soon are kidnapped and transported to another galaxy. Your character can be saved and used in the subsequent games which will be titled *The Dungeon*, *The Arena*, *The Place*, *The Wilderness*, *Revelation* and *Destiny*. The Hawaiian company, Paradise Programming, is designing the entire series. . .More DataSoft news: *Mr. Do* was just released and $5 rebates on nine products were announced. . .

Talking about rebates: Parker Brothers is giving cartridges away! Buy Atari 2600 and Intellivision games like *Frogger*, *Reactor* and *The Empire Strikes Back* for $5 at Toys 'R' Us, then send in for a five-buck rebate, and you've got yourself a freebie. Of course, the question is: What are you going to do with the games?. . . According to the Electronics Industry Association, sales of game cartridges in 1984 was nearly 50 percent lower than in 1983, and should drop by another 25 percent this year. That's all?. . .Atari 800XL's are selling for less than $100, the disk drive for about $180. Whatta deal. . .

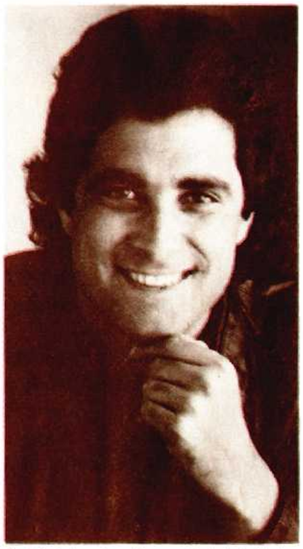
Encyclopaedia Britannica recently bought the software subsidiaries DesignWare and Edu-Ware from Management Science America, Inc. The two will be merged and operate as a unit of the Britannica Learning Corp. There is some question about the status of the products both companies showed at last January's electronics show. Edu-Ware was best known for *The Prisoner* and *Rendezvous*, DesignWare had yet to really establish itself. . .Rumor has it that Spinnaker may be moving out of the educational software market. . .There's no love lost between CBS Software and Children's Computer Workshop, where a majority of the programming staff was laid off in March. CBS has decided not to release most of the CCW software it had advanced mucho bucks towards. . .

Adam owners starving for new games can buy *The Best of B.C.*, which includes *Quest for Tires* and the B.C. sequel, *Grog's Revenge*. Sydney Development Corp. and Video Take-Out are working together on this venture. Interphase and Sydney have also agreed to package *The Best of Interphase* for Adam. . .MicroProse games fly, especially *F-15 Strike Eagle*, *Solo Flight*, and *Kennedy Approach*. The latter is an air-controller simulation that has built-in speech synthesis. . .*ClickArt: Effects* from T/Maker, for the Mac, adds four graphic tools to *MacPaint*: rotate, slant, distort, perspective. . .

Software Access, the research firm, says Yuppies are Apple's best friends. "Owners of the Apple Macintosh are younger, wealthier and better-educated than owners of other makes of personal computers," SA concluded after querying 3700 computer users late last year. Keep your chin up, Commodore owners — someday you'll be Yuppies too.

## MASTER OF THE VAMPS

Before he was recruited by Activision, game designer Russell Lieblich wrote scores for such memorable Saturday morning cartoon shows as "Godzilla vs. the Megavolt Monster." Even though he believes that cartoons "are still way ahead of games, technically," Lieblich took his musical skills to the computer game market and quickly produced two programs, *Master of the Lamps* and *Web Dimension*, for the Silicon Valley software firm. *Web* was called "charming" and "original" and described as "worth playing just to listen to all the musical interludes" in the May CE.



Activision's Russell Lieblich: Bored with the C-64's SID chip.

Lieblich says Beethoven was the inspiration for most of the 11 arrangements he programmed for *Web Dimension*. When a dimension in the web is completed, the program plays one of the arrangements. "I'm happy with what I've accomplished," he observes, "but I'm really bored with the Commodore's three-voice [SID] chip. I'm ready to start programming on a 24-voice sound generation system."

All Lieblich would say about the music program he's currently writing for Activision is that Beethoven is "even more the basis for it," and that the game will be "psychedelic." Sounds like a "Looney Tune" to us.

## PROBING THE PREZ

Can't seem to get a read on Ronald Reagan? *Mind Prober*, the program that promises to teach you how to analyze others, can help. After punching in a number of answers about our man in the White House, this is what we found out:

- He tends to do whatever it takes to be a crowd pleaser.
- Beware of his promises: he makes them easily and doesn't always follow through.
- In his eagerness to make others happy he may

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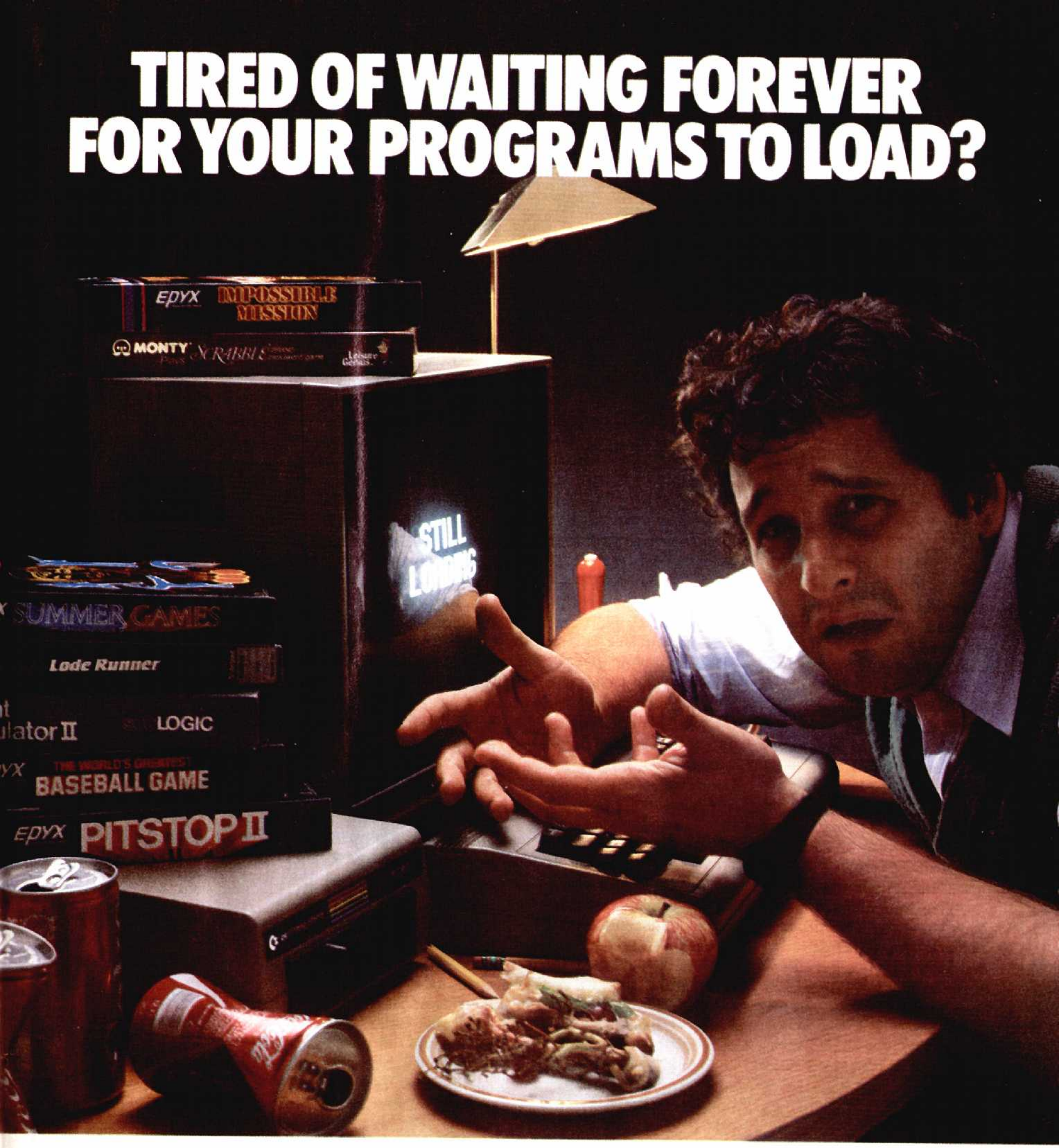
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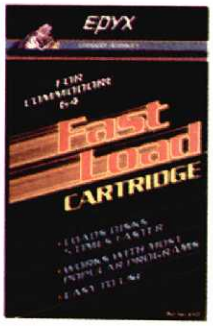
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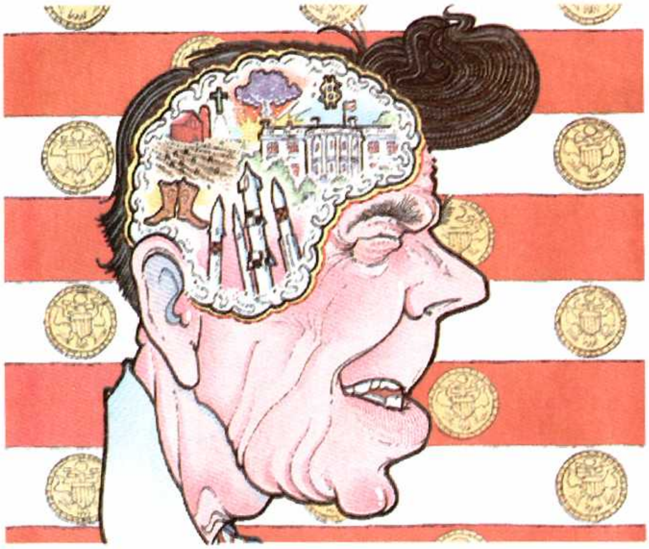
# Bulletin Board

**Notes from the Neighborhood**



sometimes avoid any unpleasant but necessary aspects of his job.

- He's likely to ignore pressures, continuing to joke and act as if nothing were wrong.
- He is likely to be cool and skilled at whatever happens during lovemaking.
- Open aggression usually bothers him. He would rather give in to an adversary than behave in a socially improper way.
- This person would love to be an actor, a politician, or something else that would give him center stage and national prominence.

## HIGH SCORES FOR HUNGER

Few have done more for the arcade game industry than Walter Day, the diminutive and determined top dog at the Twin Galaxies International Scoreboard. Despite declining arcade revenues, Day's organization is sponsoring yet another high-score shootout (the 1985 Video Game Masters Tournament) from June 28-30. But Day has more than world records on his mind this time around: world hunger will be addressed when players take their turns on several games (Cinematronics' *Cerberus*, SNK's *Hal 21* and Exidy's *Cheyenne*). Funds raised during these competitions will go directly to CARE's Campaign for Africa.

While scoring points for Ethiopia and other starving African nations should prove to be sufficient motivation on this weekend, players will have the added incentive of winning free arcade games and the distinction of being listed in the 1986 *Guinness Book of World Records*. Eighty-five different records will be up for grabs at contest sites all over the country. For more information on the tournament, call: (816) 436-5785.

Twin Galaxies also recently announced its "Achievement Award" winners for 1984. They are: Nintendo's *Punch-Out* (best video game), Cinematronics' *Space Ace* (best laserdisc game), Atari's *I, Robot* (most innovative game and best visual-enhanced game), Bally's *Spy Hunter* (best audio-enhanced game). Atari was named the "manufacturer of the year."

## MARBLE MADMAN

Mark Cerny started hacking when he was 12. At 16, he was a champion at *Defender* (he claims to be the first to "wrap" the game over one million points). A year later, he was working for Atari, having dropped out of the physics program at the University of California at Berkeley. Now, just 20, he's got one of the hottest games in the arcades — *Marble Madness*.

Cerny came up with the idea for *Marble Madness* — the chase game set in a three-dimensional mazeland — in January, 1983. "I wanted to make a game with clean 3-D surfaces," he says. "Something with perspective and gravity."

He's quick to share credit for the game's design with programmer Bob Flanagan. Though it was Cerny who created the "slinkies" (the green and red hopping creatures) and programmed them to disappear behind pillars, it was Flanagan who devised their movement. Cerny spent most of his time thinking about the "look" of the game. Later, artists touched up the various features, such as fences, drawbridges, and pipes.

Atari became aware of Cerny when he worked for the company as a game tester. In fact, one game, *Gravitar*, flopped in the arcades, partially due to Cerny, who found it too easy to play. The revised *Gravitar* that went out the door never did much business — it was too hard!

"Mark's a genius," raves Owen Rubin, an ex-Atari game designer, now with Bally Sente. "He started working at Atari when I was doing *The Adventures of Major Havoc*. I was really stuck with it, and Mark turned it around. We had some ego problems at first, but then he really pushed the project forward."

Cerny didn't have any problems giving out a few hints about *Marble Madness*. "Don't wait for the waves," he says, referring to the green waves on the second level. "If you go fast enough, you can cut in front of the first one. Also, you can get by the oozes [the turquoise acid puddles] by just racing straight down the center."

But here's the hint that's guaranteed to wow your friends: On the third level (there are five), your marble starts on the top of a pillar. From there, a ramp leads down to a canyon-type maze that is painfully slow to travel through. Wouldn't it be nice to skip the maze? You can — by jumping from the ramp to a plateau in the center of the screen. All you have to do, says Cerny, is roll your marble one-and-a-half squares on the ramp, staying on the inside, and then leap to the plateau. It's madness, we know, but you've got to give it a try.

**Mark Cerny on Marble Madness: "Don't wait for the waves."**

# Bulletin Board

Notes from the Neighborhood

## SYNTAX ERROR ROCKS

In the basement of a Chelsea warehouse — only blocks away from New York's Madison Square Garden, where many an aspiring musician dreams of playing one day — the strains of a new rock group, Syntax Error, seep from a small practice studio. Why the name Syntax Error? "I was taking a computer class and I was doing very badly," explains vocalist and band leader John Dorian. "The message kept popping up on the screen, and the name just kind of stuck in my head, you know."

**Singer John Dorian: "The name just kind of stuck in my head."**

With appearances at New York clubs like CBGB's, The Ritz, and Danceteria under its belt, Syntax is planning to cut an EP (extended-play album). Ten songs have already been written for the debut. But Dorian has decided not to incorporate computer-generated music into the band's already eclectic mix of funk, soul and rock, because "we want to keep the human element in."

Syntax's six members, all in their twenties and weaned on television, are still particularly fond of the themes from *Batman* and *Gilligan's Island.* Musically, they've been influenced by David Bowie, Bryan Ferry, and Roxy Music. "We don't want to be messiahs," Dorian says about his politically-fueled lyrics. "We're trying to rise above structures and liberate the self from things that tie you down."

Existential, escapist and anti-establishment, Syntax Error needs some refinement, but the band is certainly no mistake.

## WHAT'S IN A NAME CHANGE?

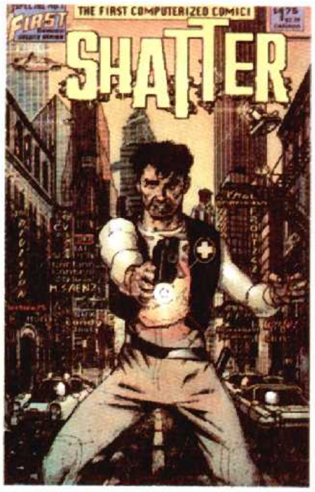
Spinnaker's Trillium line of interactive fiction software — including *Shadowkeep, Dragonworld, Amazon, Rendezvous with Rama* and *Fahrenheit 451* — was changed to Telarium when Spinnaker learned that Trillium was already the moniker of another company. Why Telarium? "We just made it up," says a company publicist. "It sounded sci-fi like."

The sixth of the originally-announced Telarium titles — an adaptation of Robert Heinlein's *Starman Jones* — is still in development and won't be released until sometime this summer. Spinnaker is also busily preparing the first two of five programs that will be based on Roger Zelazny's *Amber* series. "It's all character interaction, not geography," explains Seth Godin, Spinnaker's director of product development. "If you forget to pick up anything, you can't go back and get it. So far, the flow chart [for *Amber*] is 11 feet long."

Spinnaker is also adding three new titles to its Windham Classics line — *The Wizard of Oz, Alice in Wonderland* and *The Adventures of Robin Hood. The Wizard of Oz* program is based on L. Frank Baum's book, not the legendary movie, and features less familiar characters and the monkey chase scene to the tune of Wagner's "Ride of the Valkyries." Coincidentally, Disney is currently producing a remake of the 1939 film that's sticking to the original story as well.

Finally, Spinnaker has translated the five Telarium games for the Macintosh. *Dragonworld* and *451* are already available; the other three should be out this month.

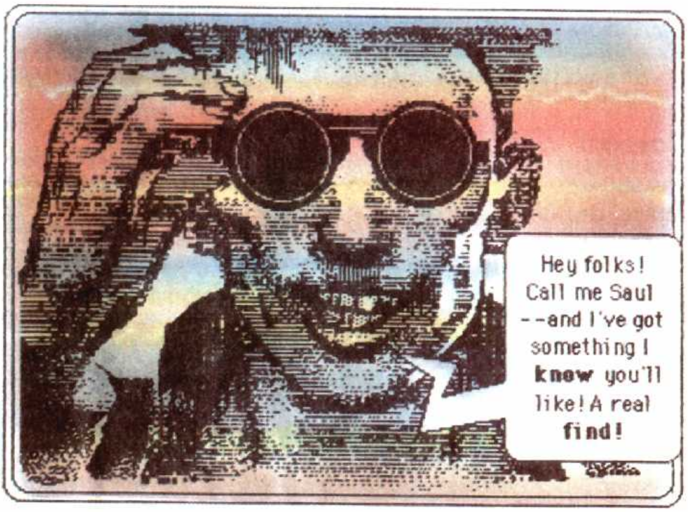
## MAC-COMIC SELLS OUT



The first-ever computerized comic book, *Shatter,* published by First Comics in March, sold out its first printing (60,000 copies) in four days. The company immediately ordered a second printing of the 32-page book that was created by Michael Saenz and Peter Gillis on a Macintosh computer.

"We didn't get many advance orders," says Rick Oliver, First Comics' editorial coordinator. "The specialty comic-book stores tend to go for known quantities. This is entirely new."

Oliver believes that computer enthusiasts are responsible for most of the sales. Apparently, they're excited about this new Mac-application. "It's easy to do," Oliver explains, "once you get the hang of drawing with the mouse. You can file characters and use basic poses over and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over. For shading, you specify an area and just slap it in. It took Michael and Peter a few weeks to draw and letter the whole comic. The advantage of the Mac is not that it saves so much time, but that it gives you a completely different look."

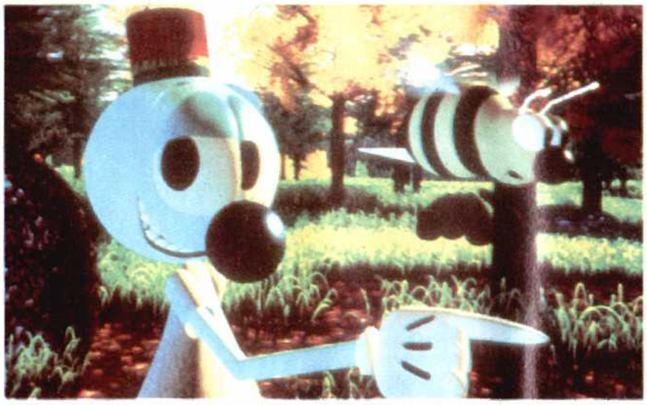
*Shatter* is fairly typical sci-fi: it's about RNA-transferring on a black market in the high-tech futureworld of Chicagoland (set in Daley City). Six more eight-page installments of *Shatter* will run in upcoming issues of *Jon Sable, Freelance*, another First Comics' publication. If interest continues at this level, another *Shatter* special will go into production later in the year.

"Computers won't replace traditional comic book methods," Oliver insists. Comparing this breakthrough to the air brush, he says, "One hundred years ago they didn't have the air brush. It's accepted now, but it didn't really replace anything. It'll be the same with computers."

## ADVENTUROUS 'ANDRE' DEBUTS

Lucasfilm does more than just make trend-setting and record-breaking films. The company's Computer Graphics Department contributed the "Genesis" segment for *Star Trek II*, and more recently has created a three-minute piece titled, "The Adventures of Andre and Wally B." which recently highlighted the Computer Graphics '85 expo in Dallas.

"Andre" features a robot and a bee (named for Andre Gregory of *My Dinner With. . .*and Wallace Shawn, who played opposite Andre in the movie) in a forest. Simple enough. What's complicated is how Lucasfilm's graphics team went about designing the "motion blur" images which set "Andre" apart from other computer-graphic efforts. According to director Alvy Ray Smith, "Without motion blur, animated characters and sets tend to strobe. This means that each image doubles up — a distracting departure from real-world motion. The solution, we found, is to blur every part of an object in the direction of its motion, as if it were moving with the camera shutter open. Thus, Andre and Wally are always motion-blurred in the film."



Scenes from Lucasfilm's computerized, "Andre and Wally B."

Lucasfilm rolled out the heavy artillery for "Andre." Four in-house VAX computers (three 11/750s and a 11/780) and an additional 10 VAX 11/750s at M.I.T. as well as two Cray computers (XMP-2 and XMP-4), courtesy of Cray Research, were all called into active duty. The opening shot of 46,254 different trees (created by Bill Reeves), for instance, couldn't have been done without an astounding amount of computing power. The piece's music is also worth noting: Ben Burtt, the award-winning sound designer (*Star Wars, Raiders*) wrote the score. "He eventually used a cousin of The Bronx Cheer mixed with a 'thhip, thhip, thhip' sound — a tribute to *Apocalyse Now*, Ben said — for Wally," Smith says.

Unfortunately, "Andre" is an in-house production made for demonstration purposes only. The special effects Lucasfilm is producing for two new films, *Cocoon* and *Explorers*, however, will soon be coming to theaters near you.

## QUOTE OF THE MONTH

Blame it on computers, right? Wrong. When New York's loquacious hizzoner, Ed Koch, was informed that two fugitives the city had been tracking down were actually in jail where they belonged, he quipped:

"There's no question that when you use a computer and you're dealing with large numbers that on occasion the computer is going to make an error. So what?"

## SUPER NEWS

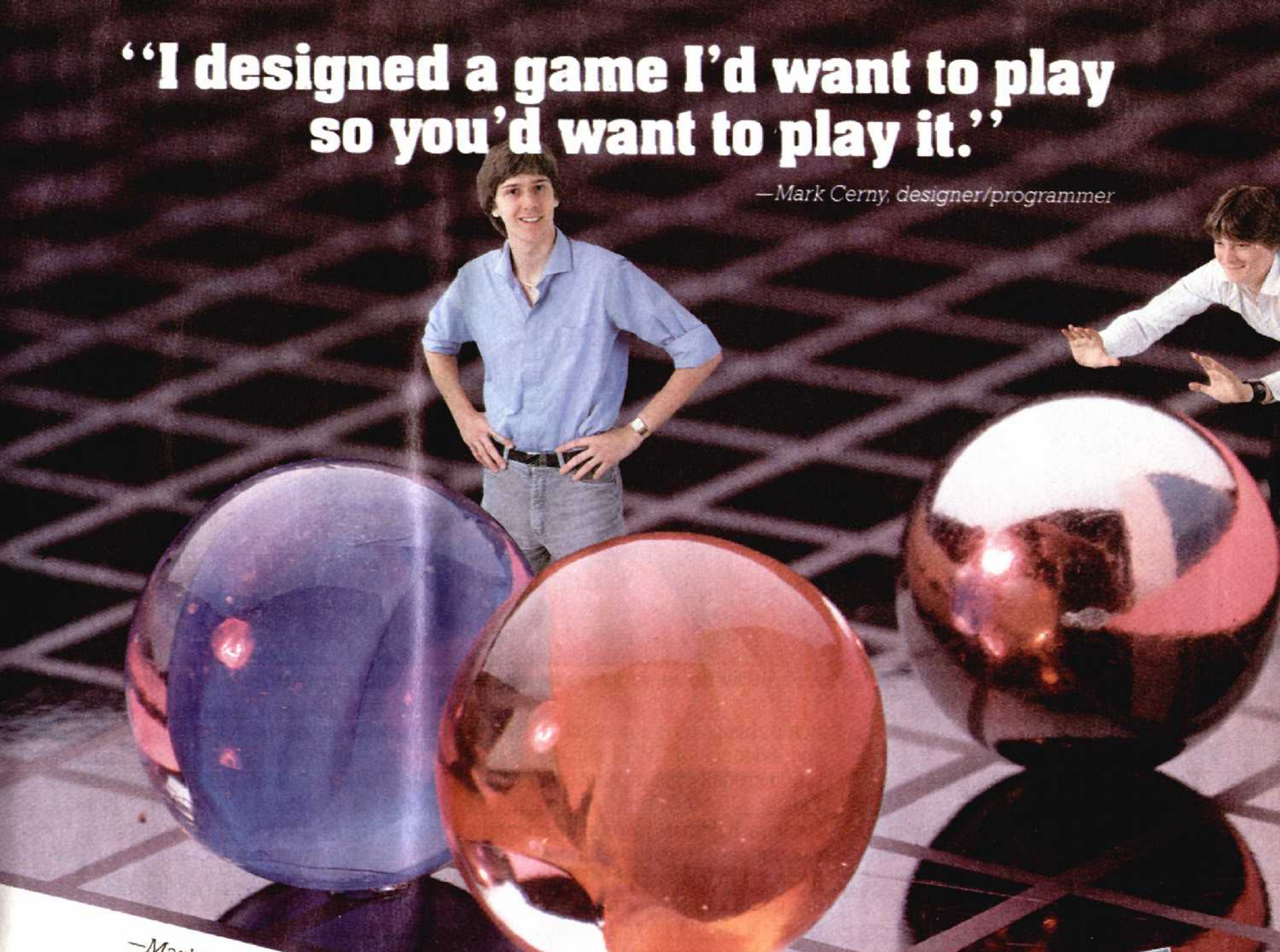
First Star Software has signed a deal with DC Comics for the licensing rights to games based on the *Superman*, *Wonder Woman* and *Darkseid* comics. The first of this new First Star series will be available by Christmas. A *Spy vs. Spy* sequel is also in the works.

## THE ROE SHOW

CE National Editor Roe R. Adams III had more computer games than he knew what to do with, so he recently donated about one thousand pieces to the Gutman Library at Harvard. That leaves him with about 6000 programs. How did all this madness begin? "In 1979, Crothers and Woods' *Adventure* hooked me," says the man who is known to dissect games faster than a dog swallows meat. "I have a vast video library, and I catalogued it with Stoneware's *DB Master* on my first Apple. I still think that's the best database program that was ever done."

# "I designed a game I'd want to play so you'd want to play it."

—Mark Cerny, designer/programmer



—Mark is an expert game player turned expert game designer. At 16 he was the first to "wrap" Defender at 1,000,000 points. He's never stopped getting high scores on video games or at the University of California at Berkeley. Today at 20 (with help from his team partner, Bob Flanagan), Mark has applied his "whiz kid" player experience and talent as a programmer to designing a coin video so big it'll blow you away.

"Like you, I've played a zillion ho-hum videos. So when I got the chance at Atari Games I designed a game that I could get into. . . that would really make it for me. Its craziness turned out to be great fun for everybody—beginners or experts!

It's sports competition, kinetics and strategy. . . a simultaneous 2-player marble race (you against an opponent or the computer) over fantastic 3-D terrains to find out who can Trak-Ball their marble over the Goal Line first.

Sounds easy, right? Wrong. You have to make sure your opponent doesn't trash you, or the "steelie" doesn't get you (don't pay any attention to Bob back there). Then there are all kinds of weirded-out creatures and objects to bust you—all the way through the six game levels. Ever get eaten by a hungry marble muncher? Vacuumed by a giant Hoover?"

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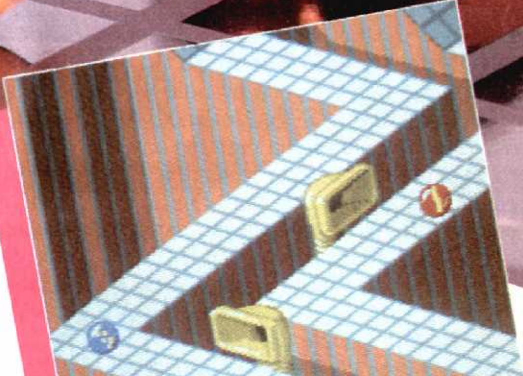

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# Line Feed

## Domestic and Foreign Correspondence

Commodore's new 128K computer.

### READ IT IN THE HOTLINE

I own a Commodore 64, and I noticed in Hotline ("Atari, Commodore Clash at CES," EG, April) that you favored the new Atari computers over Commodore's new 128. Well, I called Commodore and asked them about their computer. They said the 128 can re-program the 1571 disk drive, so it's DOS is compatible with other computers — the Atari 800, the Apple II series, and others. You only said it was compatible with the Commodore 64. And why didn't you mention anything about Commodore's new lap computer, the portable with the 80 column LCD screen? Are you going to get rid of the Commodore altogether?

Jonathan Charles
New York, NY

*Ed: We didn't really favor the Atari ST computers over the Commodore 128 — fact is, Atari was the talk of the January show where the STs were introduced. So we simply "led" with Atari. And we don't really cover lap computers, but here are some specs on Commodore's LCD portable: 32K RAM; 96K ROM; 80 x 16 display; built-in software including wordprocessing, spreadsheet, and file manager; and built-in 300-baud modem. Look for a review of the 128 soon.*

### TAKING CREDIT

In the article "First Look at Commodore's Two New Micros" (Electronic Games, February), you review the tutorials available for both the Plus/4 and the C-16. We are pleased that you found these to be top-notch software and evidence of the possibility of getting incredibly good animation on the Plus/4. Although John Mathias and Barbara Feldman were instrumental as Commodore's representatives in the project's management, the credit for designing and programming these tutorials should go to Executive Systems, Inc., as indicated by the copyright.

Another top-notch program available for the new Plus/4, as well as the C-64, also developed by Executive Systems, is the *Reading Professor*, a speed reading and comprehension program published by Commodore. It is also available for the Apple II series and the IBM PC, PCjr and compatibles.

Dale Sinor, President
Executive Systems, Inc.

### HEY, WHAT ABOUT US?

Thank you for the article on MSX developments ("Japan's Computer Gambit," Electronic Games, May). I believe that the MSX is here to stay, and if any of your readers bought a TI 99/4A, an Odyssey or a Mattel Aquarius, they will appreciate the need for such a unified standard.

And that is why Interphase has reoriented its emphasis to show full support of the movement. For almost two years, we have been negotiating with the Japanese giants to assure them that we are "the MSX connection" in North America. Three Interphase titles are available in Japan, the U.K. and Europe, and two more will be released in April. The U.S. will see our product in the fall.

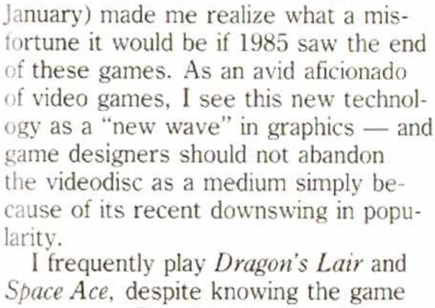
S.R. Willey, President
Interphase Technologies

### LIKES THE LASER

Dan Person's article on the rise and fall of laserdisc video games ("Laser's Last Stand," Electronic Games, January) made me realize what a misfortune it would be if 1985 saw the end of these games. As an avid aficionado of video games, I see this new technology as a "new wave" in graphics — and game designers should not abandon the videodisc as a medium simply because of its recent downswing in popularity.

I frequently play *Dragon's Lair* and *Space Ace*, despite knowing the game patterns — Don Bluth's animation makes it well worth the time. *Star Rider* is an example of how computer animation can create an artistic, surreal setting that no conventional game has. This game, as well as *M.A.C.H. 3* and *Firefox*, shows how a previously created backdrop, stored on videodisc, can work together with computer graphics.

*Dragon's Lair* did spawn a horde of lesser imitators, as your article pointed out, but every successful, groundbreaking video game has its look-a-likes — the success of *Pac-Man* filled arcades with dozens of maze games. Just because the market is saturated with imitators is no reason to give up on the videodisc; its possibilities are too great. Perhaps, someday, a designer will create a laserdisc game unlike any of its predecessors. All we can do is be patient.



SPACE ACE (STARCOM)

Mark Scerpella
Oak Creek, WI

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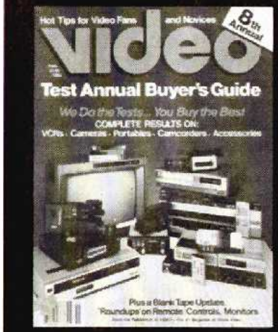
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# Line Feed

## Domestic and Foreign Correspondence

### MORE FROM VECTREX

I enjoyed the letter from a Vectrex fan in your February issue, as well as the article "Farewell to the Vectrex" (Electronic Games, September).

I am one of the original designers of the Vectrex. We were called "Western Technologies" and we did the engineering work for General Consumer Electronics, which was subsequently acquired by Milton Bradley.

I don't blame you for your response to that letter, but when you said "there will be no new games coming down the pipeline," I thought, "maybe we can do something about that."

Perhaps if there is enough interest we could put out an EPROM cartridge with some unreleased games on it. All of us who worked on the project have scattered to other jobs, but most are reachable.

Once again, thanks for your excellent coverage of the fun side of computers, and continued success.

Gerry Karr
551 Grand Blvd.
Venice, CA 90291

*Ed: Vectrex fans — if you want to see some new games for your system, let Gerry know.*

### WHAT DOES A GAMER WANT?

As a new Commodore owner without peripherals, I haven't gotten my want-list settled yet. That's where your magazine comes in handy. I list games higher in importance than utility and education (work) programs, as do most computer owners. What we all don't want is to blow our money on ho-hum games. Again, your publication is a recognized authority on what's good and what's coming. Good job so far.

The only improvements that I would suggest are a rating system broken down into categories (levels of difficulty, graphics quality, etc.), more screen art, and possibly splitting the Classified section into buy/sell/contact departments.

We also need future issues to deal with games that appeal to the over-puberty crowd. Many of the games I've seen are mindless reflex-stimulators which lose their entertainment value too quickly. I'd like you to encourage adult-level (X-rated?) software for us duffers.

Y'all done good.

Dudley Cambell
Huntsville, AL

*Ed: Thanks Dudley. We don't use a grading system because it doesn't take into account the differences among game genres. The difficulty in mastering a skill and action game is different from that of solving a text adventure.*

### AMATEUR ELECTRONICS DEPT.

Don't be misled by the Intellivision direction that it is "For Color TV Viewing Only." If you want to put your system on a black & white set, here's what you do: Purchase an Atari TV antenna box (for around $5). It should have only one output hole. Follow the directions as if you were hooking it up to a color TV. If you do it right, you'll get a perfect picture when you insert a cartridge.

John Antonelli
Dedham, MA

I've found a way to use an Atari 2600 joystick on the ColecoVision. Buy a 2600 Y-adapter and hook up one ColecoVision and one 2600 joystick. Connect the adapter to the first jack. You can pick your skill with the ColecoVision joystick, but play with the 2600 one.

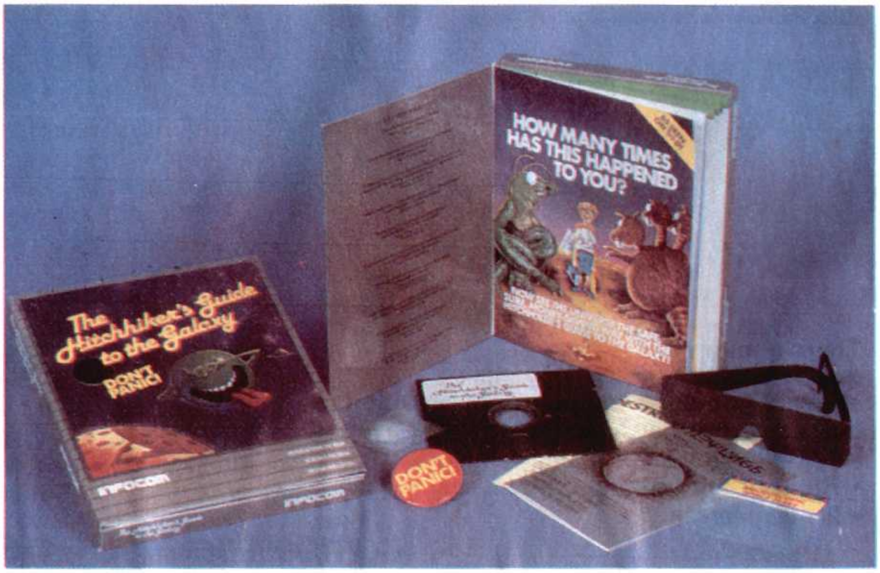
Paul Davis
Frankfort, NY

### THUMBS DOWN

I am growing disappointed with your magazine. I have been enjoying it since the first issue, and a subscriber since late '82.

For example, the cover story in the April issue is about Doug Adams' *Hitchhiker's Guide to the Galaxy.* Great! I said. A friend of mine and I have been playing the game with absolutely no success (we die just as we get out of the house). So, I say to myself, read the interview — undoubtedly it's the Game of the Month, or at least a Strategy Session is devoted to it. Wrong! A marathon on Doug Adams, and next to nothing on the game itself. Folks, this isn't "Electronic Game Authors" — it's EG. I enjoy a profile *with* a game description, not in place of one.

G.E. Schlegelmilch
Rowland Heights, CA


The Hitchhiker's Guide to the Galaxy
DON'T PANIC
INFOCOM
HOW MANY TIMES HAS THIS HAPPENED TO YOU?
DON'T PANIC

*Ed: Actually, there's a great hint in the editorial of that issue, just above the asterisks. And a review of the game, too. However, knowing how frustrating it is to get stuck in an adventure game, we've decided to get you unstuck. Don't try to get past the bulldozer; lie down in the mud in front of it for a short rest. Sort your mail or something. Don't take the towel. Listen to Ford — he's weird, but more or less reliable. When you get stuck again — and if you're anything like the rest of us, you will — let us know. We try not to give too much of a game away at one time.*

## THE INSIDE SCOOP

In On-Line (Electronic Games, March) you introduced Roe Adams, the National Editor, as a co-designer of *Ultima IV*. What I want to know is when it's going to be released? It was supposed to be out by Christmas. I've solved *Ultima III*, which was the best game ever, and am waiting anxiously.

David Greenhill
Scarsdale, NY

*Ed: Roe says he's working hard, and they hope to have it ready by September.*

## I/O ERRORS

*In "How to Vaporize Friends and Influence People" (Electronic Games, April), Marshal M. Rosenthal should have been credited for the photos.*

*In "There's a Modem to the Madness" (Electronic Games, April), Games Computers Play was incorrectly referred to as The Games Network. For further information write or call:*

*Games Computers Play*
*112 E. Market St.*
*York, PA 17401*
*(717) 848-2660*

*In "Booted Up Any Good Books Lately" (Electronic Games, April), the Epyx representative should have been identified as Robert Botch.*

*We would like to apologize for any inconvenience these errors may have caused.*

**THE 1986 GUINNESS BOOK OF WORLD RECORDS**
**has requested the results of this tournament for publication.**

# 1985 VIDEO GAME MASTERS TOURNAMENT

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# DO-IT-YOURSELF SOFTWARE

## You don't have to know a PEEK from a POKE to create great games. Construction set software may make a hacker out of you yet.

By CHARLES ARDAI

A few years back, do-it-yourself was all the rage. Everyone, it seemed, was building new additions onto their homes, rerouting their plumbing, and, most of all, building new bookshelves to hold all of their do-it-yourself hardware books. Luckily that craze died down as the number of household accidents rose. But do-it-yourself crazes have been around for a long time; people have always enjoyed designing and building things for themselves. Even if those things don't always turn out quite as well as a professional's work, at least you have the satisfaction of having built them yourself.

Back when computer-related entertainment meant another "Machine Takes Over the World" scenario up on the silver screen, the focus was on do-it-yourself hardware. In basements all over the country, hackers were building computers from kits (and from scratch). Now, with computers a more accessible, and very popular, part of our lives, it's do-it-yourself software.

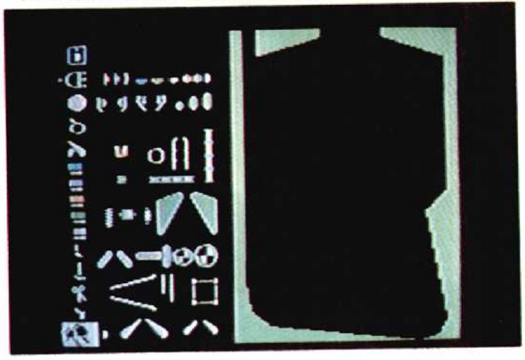
Actually, do-it-yourself, or "construction set," software is not a new phenomenon. The earliest construction sets were to be found among some of the very first arcade games. Along with *Pong* and all of its derivatives, the early arcades were home to such games as *Trek* and *Space Battle*. These games gave players control, albeit limited control, over the game by allowing them to make choices about such game features as the presence of gravity, the type of hazards to be faced, and the size of the game arena.

Games like *Space Battle* seem primitive in retrospect, but they were state of the art for their era. Though they didn't let the players change very much, they did give them a chance to modify a few game parameters. And that was enough to give birth to a whole branch of computer software — the contruction set.

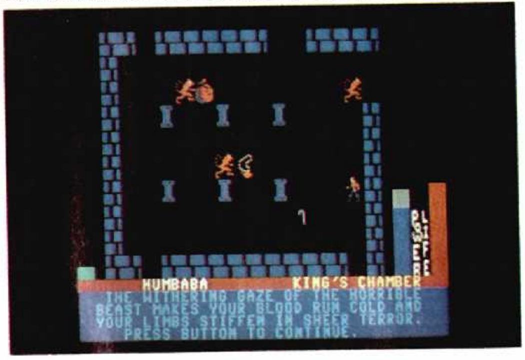
Construction sets first caught the public eye when, in the midst of the great arcade game boom, Broderbund released *The Arcade Machine*, a program written to help budding programmers design their own arcade-style action games. Not surprisingly, *The Arcade Machine* was a big success. With its menus, ready-to-use graphic characters and backgrounds, and simple procedures, this program brought game design within the reach of the average computer user.

Unfortunately, Broderbund never released any support materials for *The Arcade Machine*, despite the fact that computer users were clamoring for additional software. At about this time, the fickle public was getting bored with traditional arcade games, and was busily searching for some new sort of gaming experience — the sort of experience which *The Arcade Machine* simply couldn't provide. So, after earning itself a place in computer history as the first true home-computer construction-set program, *The Arcade Machine* faded out of the limelight without so much as eulogy.

*The Arcade Machine* lacked that elusive quality of uniqueness that a computer program must have if it is to gain lasting popularity. It also wasn't expandable enough to adapt to the changing tastes in software. Still, it was the first program of its kind, and as such, it was unusually advanced. However, its greatest accomplishment was cultivating a



PINBALL CONSTRUCTION SET (ELECTRONIC ARTS)



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HUMBABA          KING'S CHAMBER
 THE WITHERING GAZE OF THE HORRIBLE
BEAST MAKES YOUR BLOOD RUN COLD AND
YOUR LIMBS STIFFEN IN SHEER TERROR.
    PRESS BUTTON TO CONTINUE.
```

ADVENTURE CONSTRUCTION SET (ELECTRONIC ARTS)

# SOFTWARE

market for the next wave of construction sets, highlighted by Electronic Arts' exemplary *Music Construction Set* and *Pinball Construction Set.*

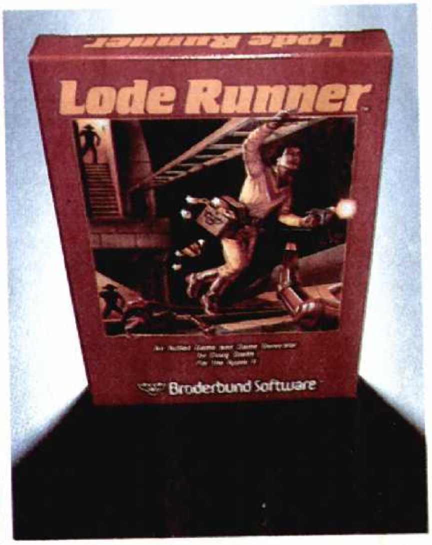
These two programs are notable not only because they set the standards for all future construction-set software, but also because they were so well designed that even today they remain bestsellers. *Music Construction Set* was the first complete music program for any home computer. It combines elements from many earlier music programs (the on-screen staff lines, for instance) with a number of entirely new editing features, an icon control system which allows any part of the program to be accessed from a single joystick, and a greater range of instrument simulations than could be found in any other program. Best of all, it appeals both to accomplished musicians who can use it as a sort of word processor for composing, and to the rest of us, the tone deaf of the world, for whom it served as an introduction to the art of writing music.

*Pinball Construction Set* is a less artistic, but no less entertaining, program which succeeds in mating two historical enemies: the computer and the pinball machine. Starting with a basic pinball-machine backdrop, aficionados can set up bumpers, flippers, sink holes and all of the other gimmicks you might find in a real pinball machine. Once constructed, the pinball machines can be played in a remarkably realistic simulation, with the players able to return to the construction phase for fine tuning at any point.

Electronic Arts had the right idea when it started making its now famous line of construction set software. Few other software series have attained the widespread, long-term popularity of these programs. And if *The Arcade Machine* prepared the world for them, they, in turn, paved the way for the newest generation of do-it-yourself software.

This new generation started with highly successful games like Broderbund's *Lode Runner* and Progressive Peripheral's *Wizard* which allow players to design their own game screens. These programs were so successful, in fact, that sequels have been released: *Championship Lode Runner* adds fifty new screens to its predecessor's roster and *Wizard Expansion Set* not only gives players forty new screens — designed by the players themselves — to play, but also introduces several new features to its already excellent construction set.

As construction-set software has become increasingly sophisticated, it has also become increasingly popular. And with popularity has come visibility; where previously the entire field consisted of a handful of programs, it now contains many traditional construction sets as well as some more unorthodox ones. One of the most interesting is in Infocom's "cryogenic nightmare," *Suspended.* The game's "CONFIGURE" command gives you control over certain game elements, and while this does not make it a construction set per se, it does afford players a unique opportunity to fiddle around with the workings of an Infocom adventure.



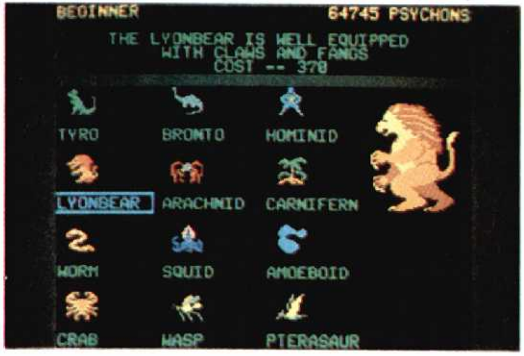
This year has seen a bumper crop of new do-it-yourself programs spring up virtually from nowhere; and now that there is a wide range of choice, buyers can be more discriminating. And well they should — parts of that bumper crop could use some weeding.

As with all types of computer software, construction sets tend to be centered around a few specific themes. Often this is because of a sudden spurt of interest in a certain topic — just as three different breakdancing games followed the media blitz on the new dance phenomenon, the tremendous popularity of adventure games has spawned no less than six programs designed to help users write their own text, graphic, and real-time action adventures.

Spinnaker's *Adventure Creator* fits into the last category; it lets you construct and then play action adventures which always entail a quest for either a predetermined item or a certain amount of gold. The quest itself is not very complex — merely involving traveling through a set of interconnected rooms, avoiding energy-draining force fields and dangerous monsters, and searching through conveniently located treasure chests until the object of the quest is found. The treasure is always discreetly tucked away in one of the treasure chests that are scattered so abundantly throughout the game. The hazards are easy to avoid, and winning the game doesn't require much thought. Needless to say, the construction set itself is equally basic and a bit shallow in comparison to some of the competition.

Nevertheless, the game might be good for your children. The monsters are adequately cute, and the program's simplicity would no doubt appeal to young users. As an introduction to adventure games (and to construction sets) for youngsters, *Adventure Creator* is ideal.

HOT WHEELS (EPYX)



MAIL ORDER MONSTERS (ELECTRONIC ARTS)

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THE LYONBEAR IS WELL EQUIPPED WITH CLAWS AND FANGS COST -- 378

For anyone who wants a meatier, more in-depth construction set, however, Electronic Arts (who else?) has just the program. Its name? *Adventure Construction Set,* naturally.

**This year has seen a bumper crop of new do-it-yourself programs. Parts of that crop could use some weeding.**

*Electronic Games* covered this newest addition to Electronic Arts' construction set family in great detail in the April issue ("After 6 Days You're Allowed A Nap"), but *Adventure Construction Set* is one program that can't be raved about too much. There is nothing simplistic about it, but there is plenty that's simple; playing *ACS*'s adventures is a joy, as everything makes more sense than anyone could possibly expect it to. The design process is sensible and logical. It takes only one perusal of the instruction manual to learn the program's intricacies, and the only thing holding you back will be the limits of your own imagination.

*Adventure Construction Set* comes with seven tutorials and one masterfully written full-length action adventure by Stuart Smith. By playing the adventure, *Rivers of Light,* and by experimenting with the program, you can quickly learn what you need to know in order to start building your own brave new worlds. It's only a small step to creating mazes, implementing magic, and getting fire-breathing dragons to trot across the screen in search of some tasty young virgins. If mystery or science fiction is more your style, *ACS* can help you there too — it comes complete with not one but three separate construction sets, for fantasy, spy/mystery and science fiction, respectively.

There is no question that *Adventure Construction Set* is an excellent program. In fact, it is so excellent that it got me, a devoted text-adventure player, to like action-adventure games, which I hadn't previously cared much for. My expectations for *ACS* weren't large, but I was very pleasantly surprised. However, being a veteran *Zork*aholic, my expectations for all of the new text adventure construction sets *were* high. Sadly, all but one of the programs fell far short of the mark.

*Adventure Master* (CBS Software) and *Adventure Writer* (Codewriter) represent two extremes of bad programming; the former is far too limited while the latter is far too excessive. But first their good points:

Both programs incorporate the elements that make up a good adventure — mapping, logical puzzles, and all the rest. Both require players to input room and object descriptions as well as vocabulary lists and responses to possible player actions. *Adventure Master* even lets users turn their text games into graphic adventures by illustrating certain scenes.

So far so good. Unfortunately, both programs have major problems. To start with, *Adventure Master*'s vocabulary lists cannot exceed a hundred words. The maximum number of objects for an *Adventure Master* game is about three dozen. Even the illustrations are limited — no more than ten can be added to an adventure. The vocabulary limitations are probably the biggest flaw: otherwise I could at least recommend the program for kids. As it is, *Adventure Master* would just frustrate them to no end.

At the other end of the spectrum, *Adventure Writer* has just the opposite problem. It tries so hard to include a large vocabulary with command synonyms, numerous response-messages and every trivial factor that could possibly affect a game that the program collapses under its own weight. Users are forever being required to check registers, set "flags," and search through endless, overcomplicated lists. The best word to describe *Adventure Writer* would be overkill.

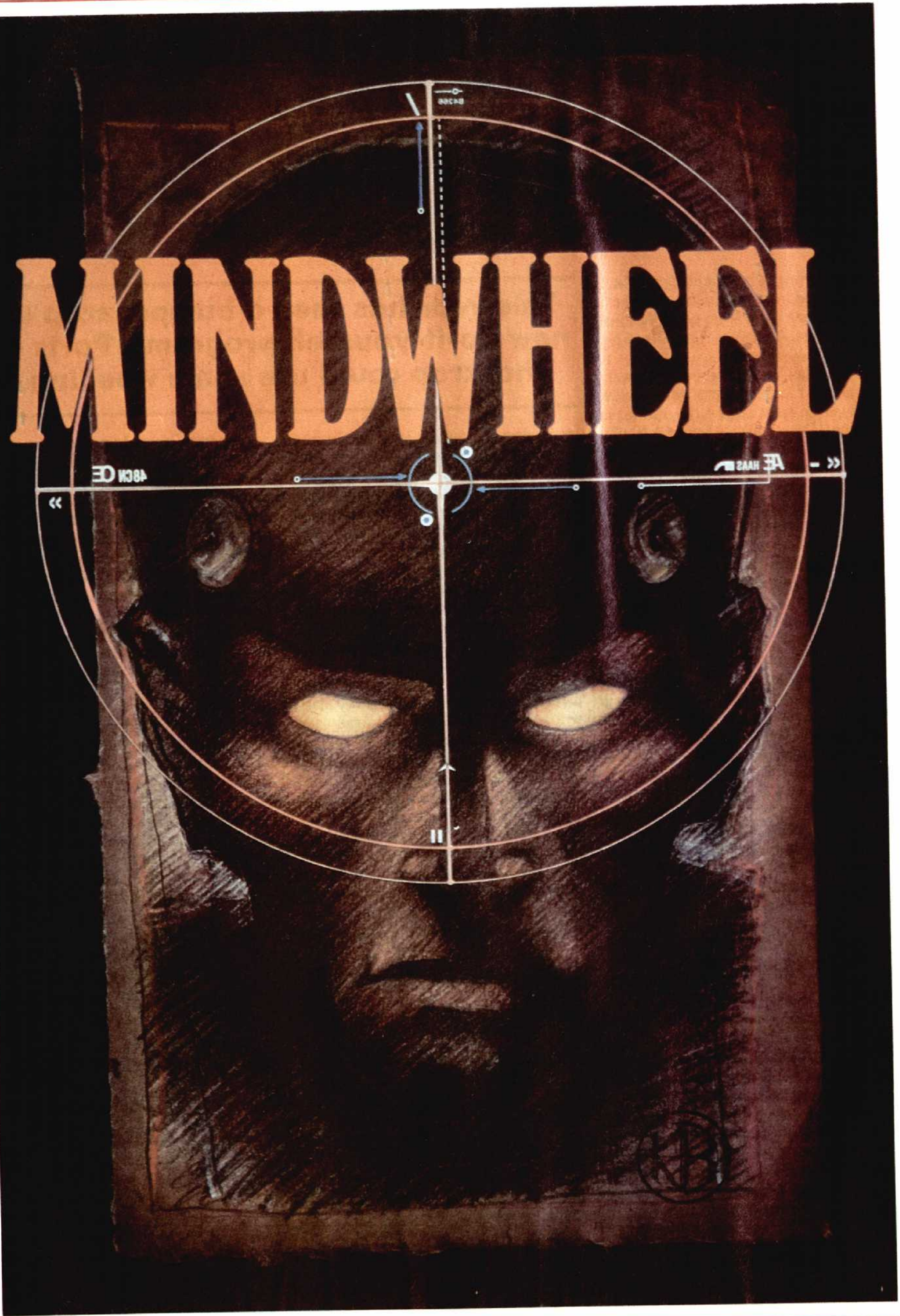
By being too zealous, Codewriter produced an inefficient program. Somewhere along the line, the programmers lost sight of the fact that the purpose of *Adventure Writer* is to design enjoyable games, not to drive users mad either out of boredom or frustration.

The only text-adventure-design program that is really worth the price is Hayden's *Computer Novel Construction*

*Continued on page 79*

KIDWRITER
SPINNAKER
STORY MACHINE
SPINNAKER

# MINDWHEEL



## Writing Synapse's first "electronic novel" was like poetry in motion for Robert Pinsky and a crack team of programmers. After *Mindwheel*, interactive fiction may never be the same.

By SCOTT MACE

Time was truly of the essense for Synapse Software. It was the summer of 1983, and the computer game business was in a serious state of flux. Arcade-type games were rapidly declining in popularity as the more literate text adventures were edging their way up the Billboard and Softsel charts. A company called Infocom was turning out monster hits with games that didn't even have graphics. Synapse, still producing shoot-'em-ups like *Fort Apocalypse*, *Shamus* and *Blue Max*, suddenly realized it had to play catch-up, and fast.

Bill Mataga, one of several hackers employed by Synapse and *Shamus'* creator, was impressed with Infocom's adventures (especially the *Zork* series), but thought there were a number of improvements that could be made. So, in the late evening hours, when Synapse's Richmond, CA offices were quiet, Mataga began fiddling with the ideas that would eventually lead to the company's remarkable text-based game, *Mindwheel*, and put Synapse back on the software map.

The first thing Mataga observed was that players of text games could issue commands like GO WEST or PICK UP THE NOTE with ease, but that most of the action revolved around grabbing and using various objects. The characters in the games did a lot of talking, but the adventurer couldn't carry on any kind of intelligent conversation for any length of time. Mataga thought he could change all that.

He took it one step further. If the adventure player could talk to computer-controlled characters in these "electronic novels," why couldn't Mataga create a game where the characters, as well as the player, were able to move around? That way, random conversations would be as much a part of the game as exploring every nook and cranny of the landscape. For that matter, Mataga decided to design games where, even if the player did nothing, the world within the game would continue to change. The program would have to keep track of more things, but it would have a heightened sense of realism.

The third thing Mataga decided to do was expand the game's vocabulary. When two characters met and the first said GIVE ME ALL YOUR MONEY, Mataga wanted the second character to be able to say YES I WILL and be understood. It wasn't a trivial task; the computer would have to know when WILL meant William, a legal document or a verb. That meant the computer had to be able to guess the meaning of a word by its placement in a sentence.

Mataga started writing a parser that would execute his ideas. When an adventure game player types in a sentence, the parser program divides the sentence up into parts and determines the subject, the verb, the object, and other parts of the sentence. Each parser understands a fixed number of words, and if the player uses words not in the parser, the game just comes back with a blank stare or an admission of ignorance.

By October 1983, Mataga had a test program up and running on an Atari 800. He knew the parser would work. But something else was needed to make the Synapse electronic novels stand out. That something was real writers, people who could create vivid text that would describe entire worlds in a few mere words. The idea wasn't new; Infocom had enlisted science fiction writers Michael Berlyn and Douglas Adams to do text for some of its most popular adventures. But Synapse wanted to try to make text adventure writing even better.

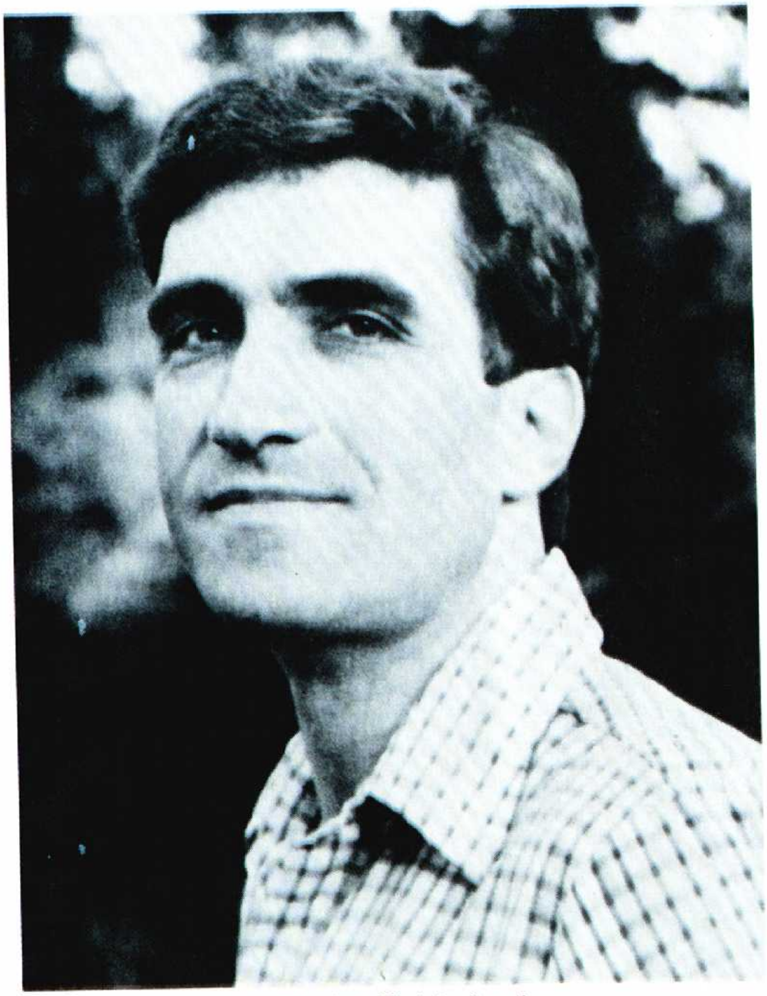
Who could be better than a poet at packing a lot of information into a few words? So Synapse co-founder Ihor Wolosenko called the creative writing department at the University of California at Berkeley, just a few miles south of Synapse's Richmond, California bayfront headquarters.

The department recommended Robert Pinsky, a writing and literature instructor at UC Berkeley. Pinsky has won numerous awards for his poetry and

# BUILDING A BETTER ZORK

# A BETTER ZORK

is *The New Republic's* poetry editor. Ecco Press publishes his poems for a small academic audience. His computer-based text could reach a lot more readers.



**Robert Pinksy, *Mindwheel's* author**

"I was finishing up a book of poems, and one day the phone rings in my office, where I rarely am," Pinsky said. "This guy on the phone says, 'Hi, I'm Ihor, I work for Synapse.' The idea was just charming to me because it was so completely stupid. I immediately said, this is so unlike everything I've done all day, that I'm going to string along with this."

Wolosenko's first phone call was the crucial thing that intrigued Pinsky. Wolosenko had a broader background than most computer programmers, having been a psychologist. During that first call, the two men discussed Aristotle and the idea of artistic unity. Despite their differing backgrounds, they found a common language to exchange ideas.

Until that call, Pinsky's closest brush with computers was the Atari his kids played video games on. Wolosenko invited Pinsky to come up to Synapse for an afternoon, and Pinsky was intrigued; he wanted to write something completely different. As visit day neared, Pinsky toyed with ideas for a story. He considered many ideas; one he called "Labyrinth," another "Town Secrets." A third he titled "Mind Warrior," and it would take the adventurer through the minds of Sigmund Freud, Karl Marx, and John Lennon.

Pinsky couldn't have been too impressed by the Synapse headquarters the afternoon he stopped by. Located in an industrial park behind several parking lots, the office was a mess; it had the look of a company that's either in disarray or has seriously outgrown its space. Synapse was experiencing financial problems — Atari had just dropped its line of productivity software (SynApps) — but Pinsky didn't care. He was psyched to write "something totally different," and told Wolosenko about his ideas. Ihor liked *Mind Warrior* best. "He dismissed the others as genre stuff," Pinsky says. "He picked the most far-out one. I actually regretted his choosing *Mind Warrior*, because I wanted to do one that was going to go fast."

But Pinsky soon found the idea of an adventure game that explored the still intact minds of dead people worth the challenge. He even began to weave in elements of "The Figured Wheel," a critically acclaimed poem and a favorite at Pinsky's readings from *History of My Heart*, a collection of his poetry. It was a natural fit, since "The Figured Wheel" is about everything in the world, all of civilization, and an adventure game is itself an entire world. Pinsky had also used a "Wheel of Fortune" image in several of his works, and immediately understood that a chance factor would make adventure games more interesting, and more lifelike.

**Mataga's parser now contains 1200 words; Infocom advertises recognition of 600 words in its games. He nicknamed the parser BTZ, for Better Than *Zork*.**

The game's name was changed from *Mind Warrior* to *Mindwheel*, and wild ideas started to fly around. Pinsky first invented a thing called a Moral Matrix, filled it with qualities like creativity, glory, aggression, sex — every possible human drive he could think of. The game would revolve around that moral matrix, and it would explain the actions of all the characters. "You'd have to experience everything to get through the game," Pinsky said. "That quickly dissolved into

*Continued on page 77*

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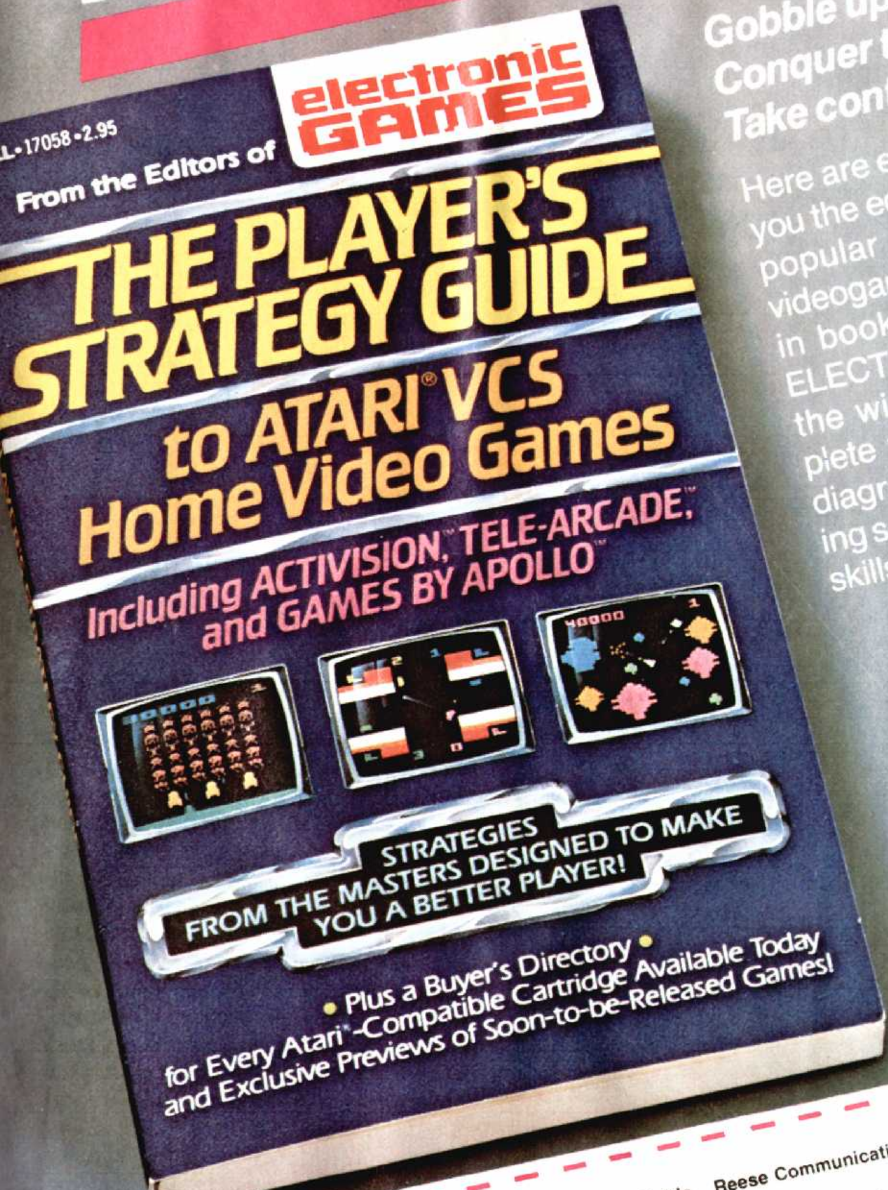
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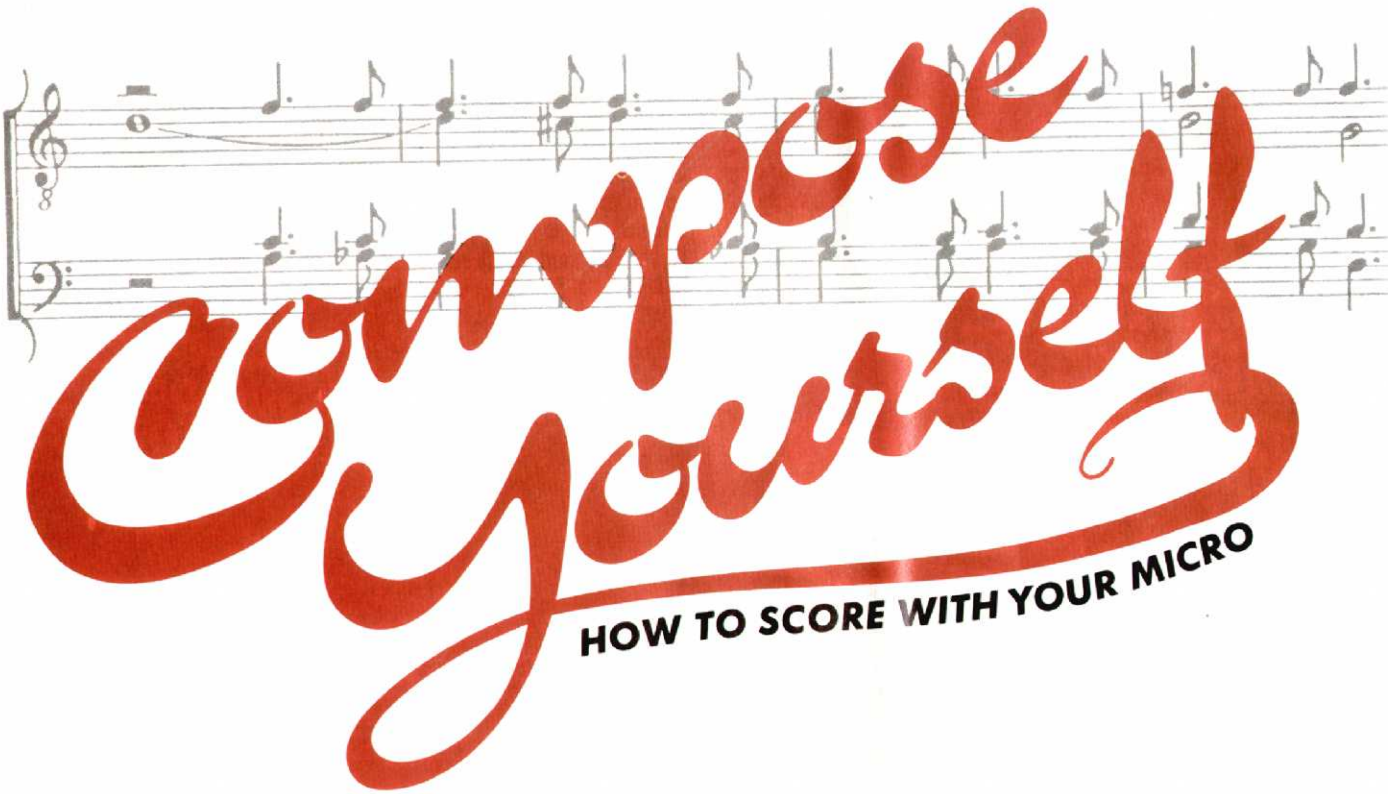
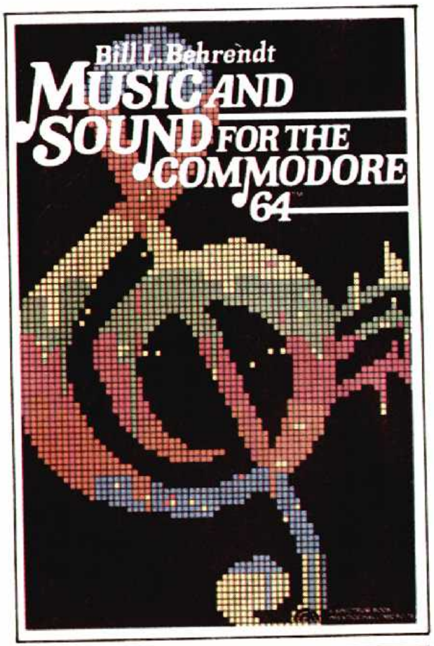


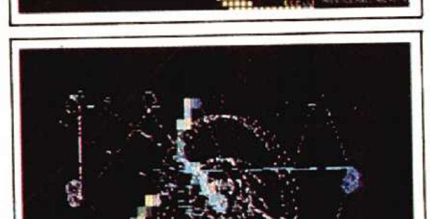
## HOW TO SCORE WITH YOUR MICRO

By JOHN AMARAL

We all have something in common: a fundamental understanding of the language of music. While most people appreciate all kinds of musical styles, composition has been pretty much restricted to those with certain musical skills. Until computers came along, creating music was regarded as a tedious exercise at best. It required learning music theory and was equated with weekly trips to the piano teacher and a lot of boring practice. With computers much of that tedium has been shown the door; in fact, there are many programs available that let you make music almost instantly.

I'll tell you about the good, the bad and the ugly in music software and add-on keyboards in a minute. But first, a little historical perspective. Mattel's Intellivision was the market progenitor of the Commodore and Atari computers of today. It was the first low-priced, microprocessor-based product with a chameleonic nature — Intellivision could be transformed into a variety of other products, such as a programmable computer and, by hooking it up to a four-octave keyboard, a music synthesizer.

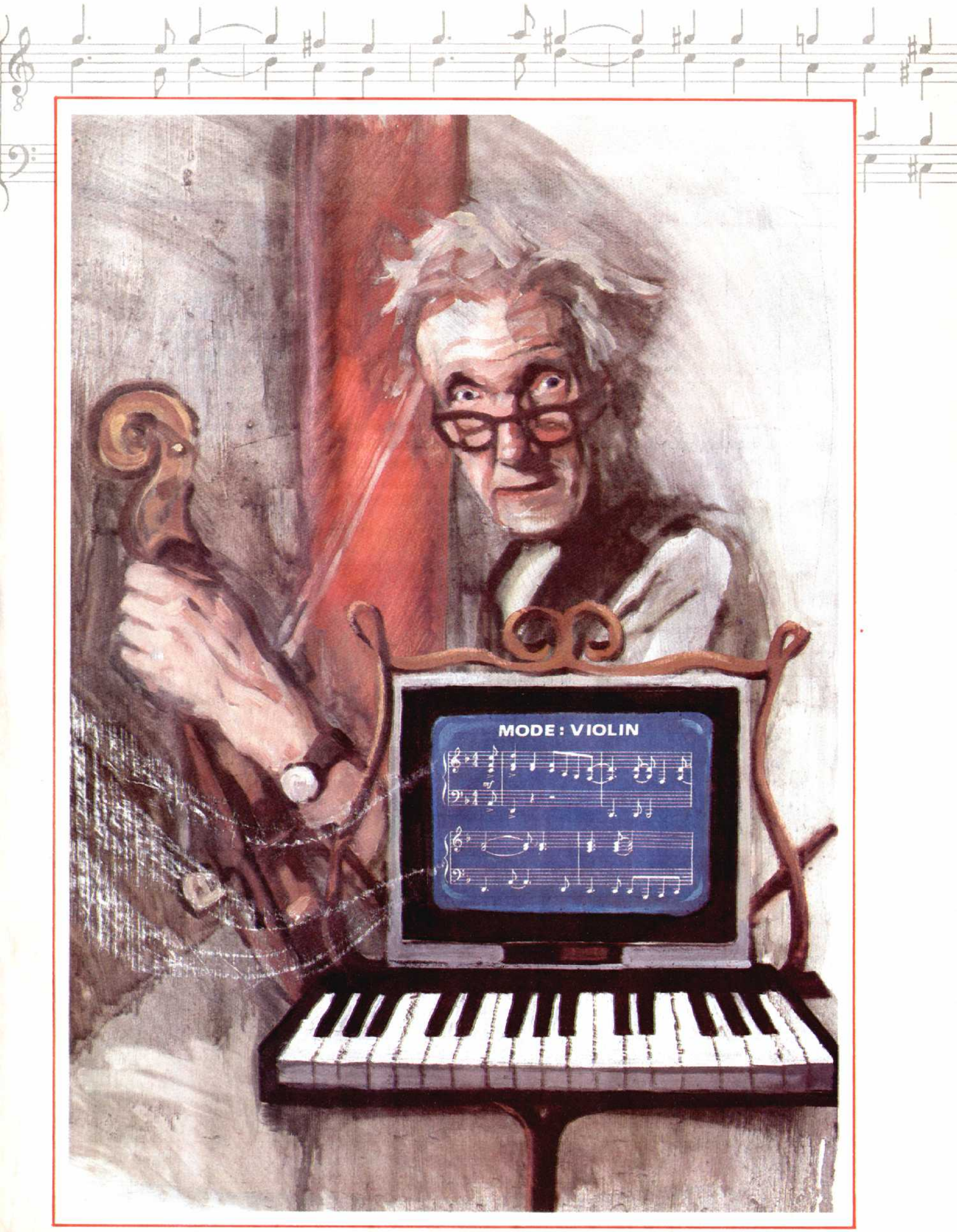




MOONDUST (CREATIVE SOFTWARE)

Unfortunately, Intellivision was never recognized for its musical capabilities. Instead, it was the Commodore 64 that would capture hearts and minds of music-software developers. The reason for this longterm romance is SID. When the Commodore was conceived, the engineers put a lot of money into designing a versatile Sound Interface Device chip. SID has three independent channels and generates remarkable sound quality. It's also easily programmable and, consequently, there are many more musical products written for it. (If you'd like to try some simple music software programming of your own on your C-64, there's an excellent book from Prentice-Hall which explains everything from sound synthesis to the SID chip and how to program it. Written by Bill Behrendt, it's called *Music and Sound for the Commodore 64*. It's user-friendly and comes with a disk containing application examples.)

The first two music products of consequence for the C-64 were *Moondust* and *Musicalc*. *Moondust* doesn't teach music theory nor does it really allow you to compose formal compositions, but it does generate music. Developed by Jaron Lanier, a musician/programmer, *Moondust* is a surrealistic, peaceful sort of game involving a spaceship, an astro-

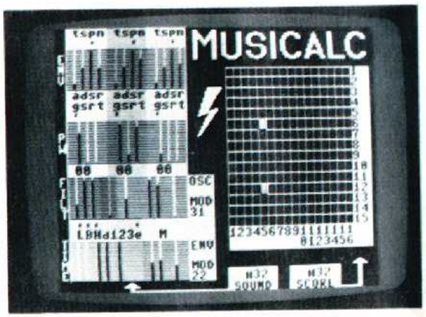


MODE : VIOLIN

# Compose Yourself

naut, yards of glittering moondust and music. Using the joystick, you control the flight path of an astronaut and compose unstructured, galactic melodies at the same time. Jaron's latest work, *Mandala*, is the musical computer language that was featured on a recent cover of *Scientific American*.

In contrast, *Musicalc* interacts with the SID chip in a much more structured way. It has some good ideas, such as prerecorded background templates and modes in which you can improvise melodies without worrying about hitting a sour note, but it's more calc than muse. The screen graphics are too complicated

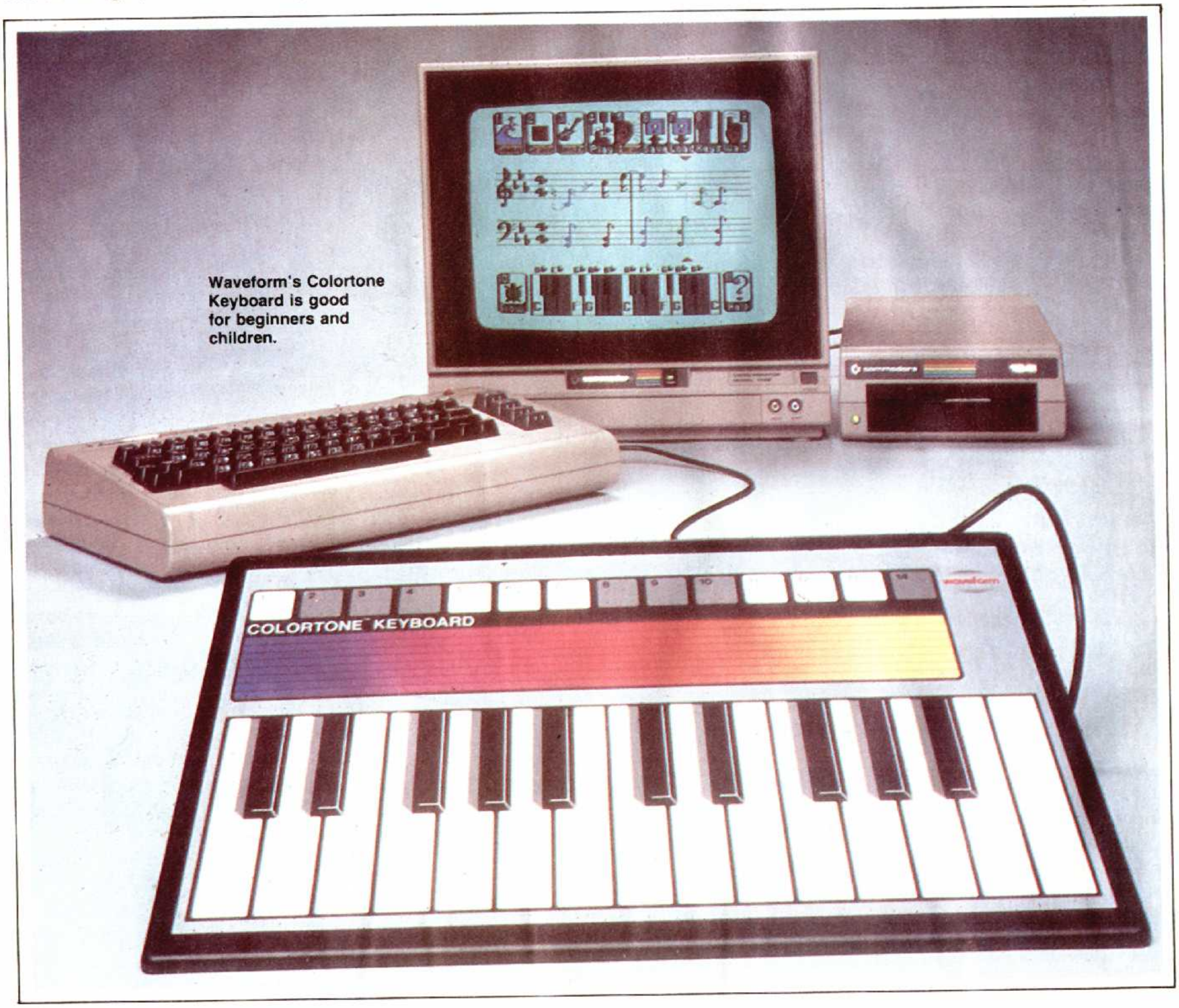


MUSICALC (WAVEFORM)

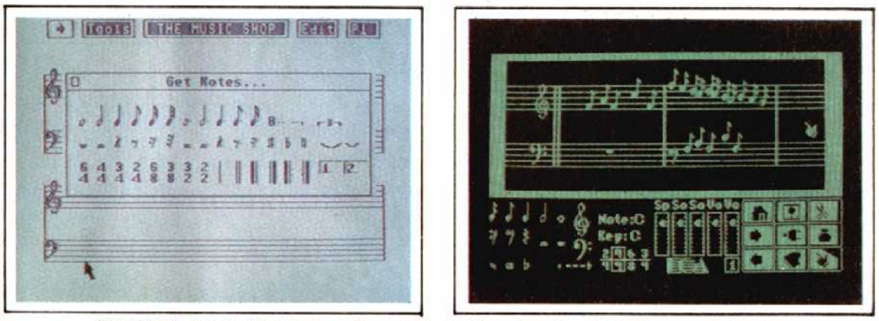
and the manual is disorganized. Despite these drawbacks, *Musicalc* must be regarded as one of the first programs to exploit the musical possibilities of the C-64.

For the beginning C-64 synthesist, Sight & Sound's *3001 Sound Odyssey* can't be beat. It's a lively animated tutorial about acoustics and synthesis which employs a hands-on approach to learning. First, *3001* demonstrates how a procedure works and then it gives you an opportunity to experiment with that procedure yourself.

A second generation product from Sight & Sound, *Music Processor* (which owes a lot to *Simply Music* from Alpha Syntauri), teaches basic awareness of pitch, counterpoint and sight reading.



Waveform's Colortone Keyboard is good for beginners and children.



*The Music Shop* (Broderbund) and *Music Construction Set* (Electronic Arts)

The jukebox mode allows you to select and play one or more pre-recorded tunes. This feature is becoming fairly common in music programs and is a good idea. In addition to providing a break from one's own composing, it can also act as a very useful educational tool — usually something can be learned from fooling around and altering the imbedded tunes.

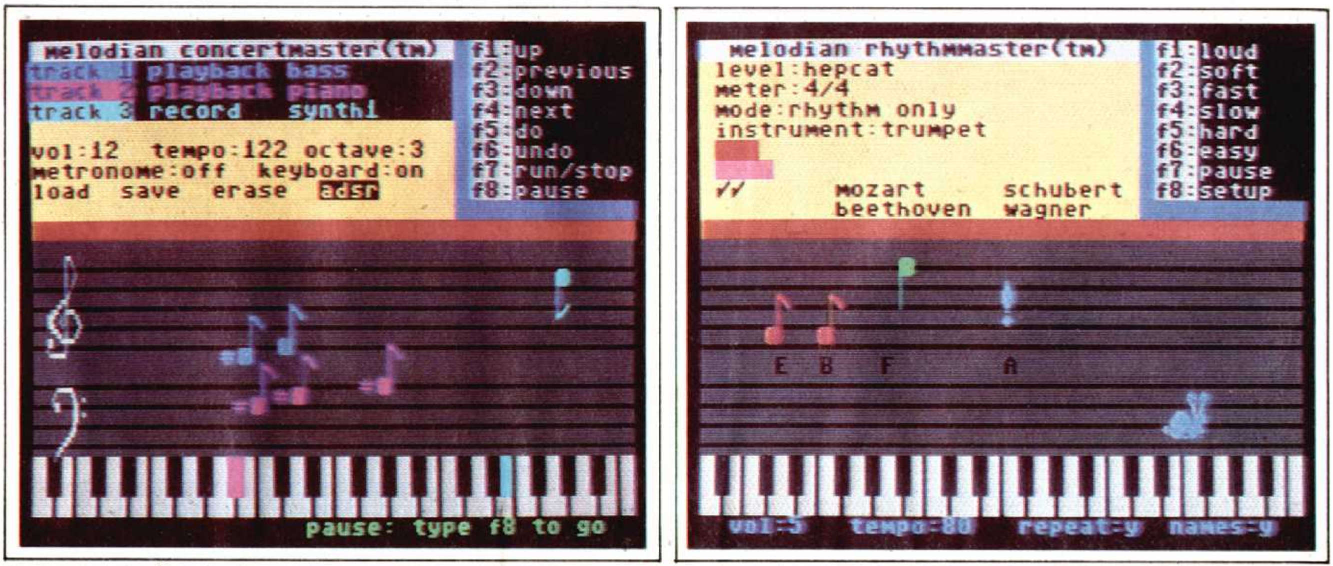
For those who are a little more serious about music and want to write and print in standard notation and play the piano keyboard, there are several worthy programs to choose from. Activision's *Music Studio* stretches the C-64 to its limits and gives full access to the SID chip. It's designed for both fledgling and experienced composers and lets you print out the deathless music you've just composed as well as any accompanying lyrics. This is a well thought-out program, as is *Music Shop*, which mimics the Macintosh window format. It's a bare bones program for writing, playing and printing sheet music and should be more than satisfactory for aspiring musicians on a budget. But, like all music printing products under $500, *Music Shop* doesn't automatically beam eighth notes and doesn't provide an option for painting the beams in by hand. It also takes more time to learn and use than *Music Studio*.

Realizing the potential of the Mac for displaying and printing music graphics, Passport has come out with *MacMusic*. It runs on the Commodore and features pull-down menus and windows with scroll bars. It also lets you paint colorful melodic lines into the windows. The imbedded tunes are popular favorites and are very well arranged. *MacMusic* has only three voices but once you've listened to the preprogrammed selections, you'll come to the conclusion that this isn't such a limitation. Although it doesn't allow you to print, you can save your work.

**One of the most sought-after applications for computer musicians is a keyboard package.**

The Macintosh is really the first computer with enough power to create excellent graphics and sound without having to add on extra hardware. There are currently two packages available for this machine which are useful, fun and musical: *ConcertWare* and Hayden's *MusicWorks*. They have a lot in common. Each allows the writing, playing and printing of music, has interesting graphics and gives you control over the quality of the four available voices. Each also comes with an extensive selection of preprogrammed tunes. Although *Con-*

*Continued on page 80*



```
 melodian concertmaster(tm)   f1:up
track 1 playback bass         f2:previous
track 2 playback piano        f3:down
track 3 record   synthi       f4:next
                              f5:do
vol:12  tempo:122 octave:3    f6:undo
metronome:off  keyboard:on    f7:run/stop
load  save  erase  adsr       f8:pause

pause: type f8 to go
```

```
 melodian rhythmmaster(tm)    f1:loud
level:hepcat                  f2:soft
meter:4/4                     f3:fast
mode:rhythm only              f4:slow
instrument:trumpet            f5:hard
                              f6:easy
                              f7:pause
✓✓       mozart     schubert  f8:setup
         beethoven  wagner

E B F A

vol:5  tempo:80  repeat:y  names:y
```

Melodian's music software: *Concert Master* (left) and *Rhythm Master*. Melodian also sells a keyboard peripheral.

## Putting your best font forward.

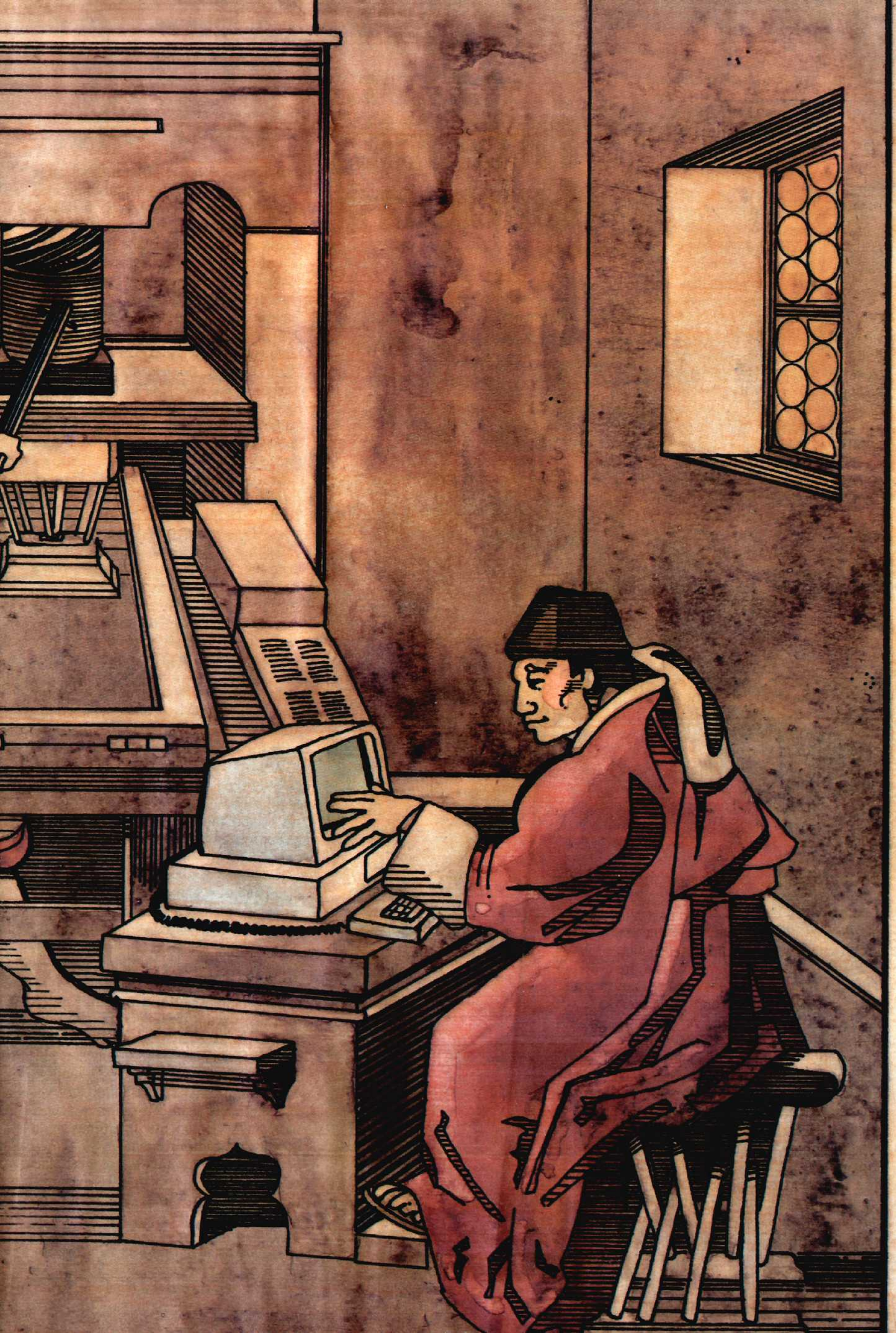
Gutenberg would be proud. The man who revolutionized printing with the invention of movable type couldn't help but see programs like Broderbund's *Print Shop* as a creative extension of his own visionary work. Just as Gutenberg liberated monks and other gothic artists from the drudgery of calligraphy, print programs are changing the way people use computers.

Until recently, computer printers could do little more than duplicate basic typefaces on sheets of paper. This led many people to believe that they could do without a printer when buying a computer system. But for those who took the plunge and bought a printer, these relatively inexpensive programs are breathing new life into their systems, and often obviating the need for upgrading their printers.

At a time when questions are still being asked about the utility of computers — beyond game playing, number-crunching and word-processing — some people are using print programs to make

# Electronic Gutenberg

By PATRICK LEWIS



# Electronic Gutenberg

From typesetting to layout, print programs let you do it all yourself.

greeting cards and fancy invitations, even to design their own comic books and resumes. No longer do you have to go outside your home to fill typesetting and printing needs — *The Print Shop*, Data Transforms' *Fontrix* and other such programs take care of all that.

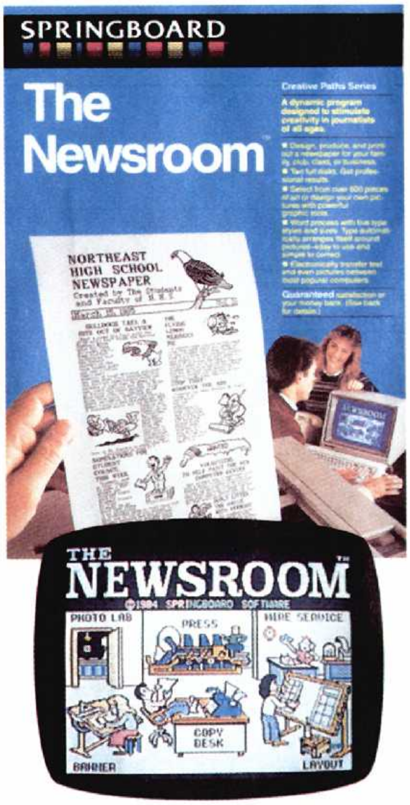
These printer-expanding programs generally fall into two categories: font downloaders and graphics programs. Font downloaders permit your printer to execute fonts, or typefaces, not designed at the factory. So, instead of printing your report in the same anonymous typeface, titles can look like titles, important points can be boldface, and your name can be displayed with the glory it deserves. Though many word processors and printers can already do boldface, headlines and other typefaces, special font programs generally offer better quality and a much wider selection of fonts.

Graphics programs such as Koala's *Graphic Editor* and Springboard's *Mask Parade*, allow you to draw images onscreen and print them out. They will be discussed in more detail in a future article.

The simplest of the font programs — *DMP Utilities* ($50, Apple II series) by Vilberg Brothers Computing, for example — loads a specific typeface into the printer's internal buffer and produces text in that type. In a way, they act as filters: what goes in bland, comes out bold. These downloaders are transparent to the user: once the font has been downloaded, the text-generating program (a word processor, data base manager, spreadsheet or whatever) runs as if nothing has changed. Nothing really has — the only difference is in the appearance of the final printed product.

While simple font downloaders are generally inexpensive, easy to use, and effective tools, they are both computer- and printer-specific. That is, the program must be formatted not only for your computer, but for your printer as well. In some cases, even the interface linking your printer to your computer must have certain specifications. As a rule, if your printer is one of the more popular brands, or emulates one, there is probably a program for you. Filter-type downloaders are considered utility programs and can be found in that section of computer stores.

On the other hand, *The Print Shop* ($49.95, Apple II series/Atari/C-64 won't accept text files from a word processor or any other program, but does offer a number of pre-formatted options (greeting cards, letterheads, banners, and signs) that make creation of these forms very fast and simple. The program is entirely menu-driven and virtually foolproof. It includes eight fonts and a choice of up to three sizes and three formats (solid, outline and three-dimensional), nine border designs and numerous pictures and symbols. As with most of these programs, you can also design your own images and fonts. Broderbund also sells additional images on *Graphics Library* disks ($24.95) and specially-designed paper in the Paper Pack ($19.95).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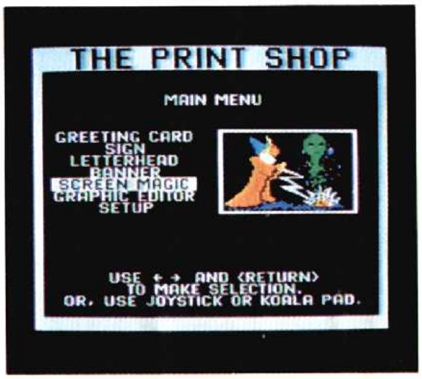

USE ← → AND <RETURN> TO MAKE SELECTION. OR, USE JOYSTICK OR KOALA PAD.

More complex and harder to use, *Fontrix* (Data Transforms) offers a blank "tablet" without the pre-formatted options. But, while *The Print Shop* provides three type sizes, *Fontrix* can produce 255, plus 96 background patterns and 96 textures in the IBM version (32 on the Apple). By using a joystick, letters or images can be moved around the screen and deposited precisely where desired. Both line and character spacing can be individually adjusted. In addition to the 11 fonts on the master disk, dozens more can be purchased separately on nine Font Packs (10 fonts per pack for $25).

Available for the Apple II series ($95) and the IBM PC ($155), the capabilities of the two *Fontrix* versions vary quite a bit — but then, the Apple version requires only 48K RAM, while the IBM needs 256K. The Apple format permits only one font in memory at a time (changing to another requires disk access), text input only from the keyboard and limited manipulation of screen images. Among other things, the IBM version can keep nine fonts in memory simultaneously and download text from an ASCII file.

Which is the better program, *Fontrix* or *The Print Shop*? As is often the case when making this sort of judgement, I have to say that it depends on what uses you have in mind. Most of the fonts in *The Print Shop* are more suited for eye-catching uses than conservative school or business documents. In attempting to do a letterhead, for example, *The Print Shop* virtually automates the task, but offers no fonts appropriate for professional use. *Fontrix* (including the additional Font Packs), on the other hand, has enough of a choice of fonts that virtually every taste can be satisfied. My

*Continued on page 76*

# video

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# ASCII

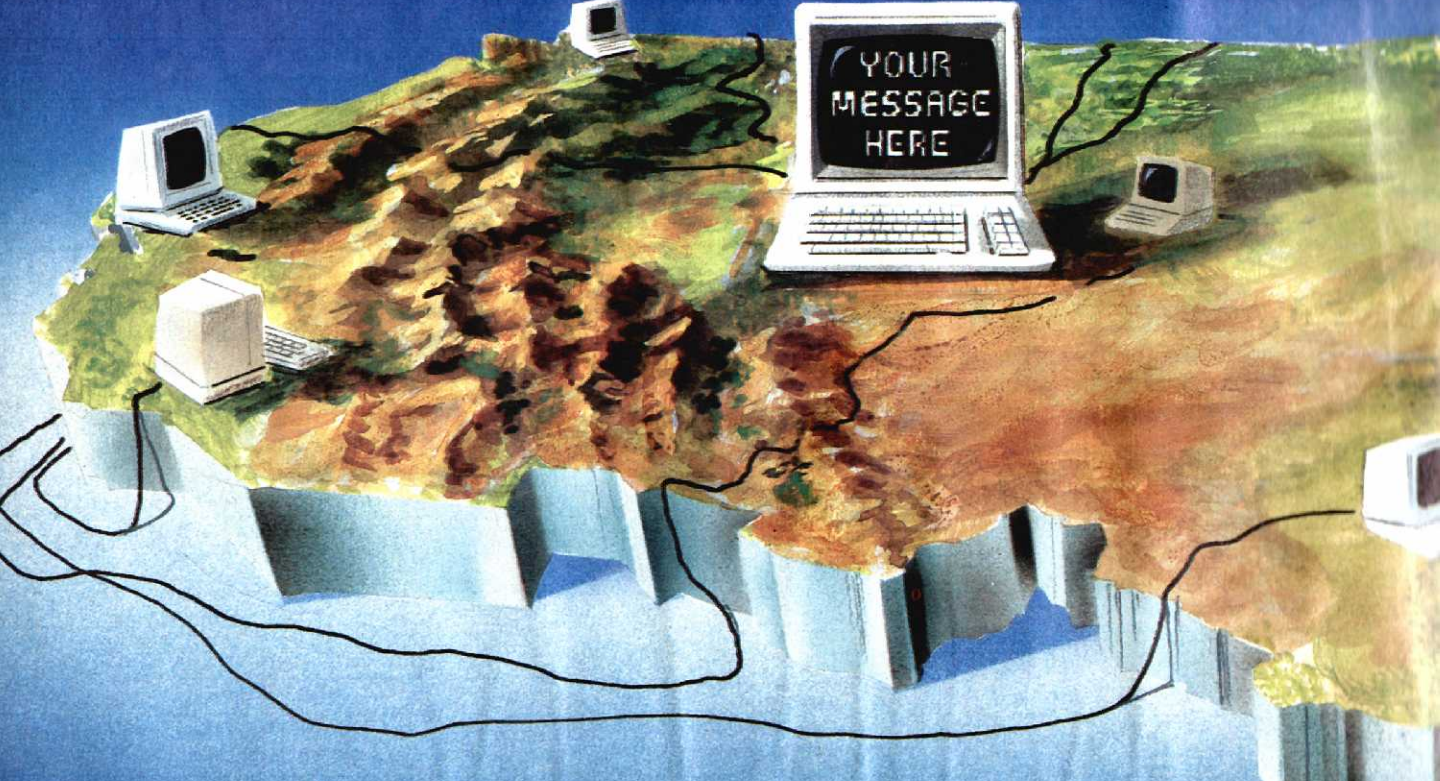
## AND YOU SHALL RECEIVE

By ROGER RAPOPORT

If you've got a computer and a modem, you probably know that you can do all sorts of exciting things: send electronic mail (too bad if your grandmother doesn't have a computer), get the latest stock market quotes, buy airline tickets, pay bills. Not very exciting, I know. Then how about tapping into the less corporate, "underground" computer bulletin boards that are proliferating around the country? Through the miracle of digital communication, that very same computer and modem can tell you who killed more Indians than the Lone Ranger, why Diskotech at San Leandro High School in California is believed to be having an affair with Mr. C-Brain, and that a nanosecond is the amount of time it takes an English governess to realize the kids are up to something.

Forget stock market reports. Log onto a bulletin board for personal ads, advice, and entertainment.

Sound interesting? All you have to do is switch your computer on and your modem to receive, and then dial numbers like (813) 377-9712. That's the line to Ron Marlowe, who calls himself "The Masked Hacker." In Austin, Texas, is the Austin Party Board, (512) 442-1116. And in Halestie, New York there is XNET, the adult computer network complete with special interest bulletin boards for personal-ad writers of every persuasion. XNET has a one-time subscription fee of $25, a monthly mailbox fee of $5 and an on-line fee of $7 to $16.50 per hour. In the San Francisco Bay Area, where I live, dozens of bulletin boards are listed in a local paper, *Computer Currents*. User groups are



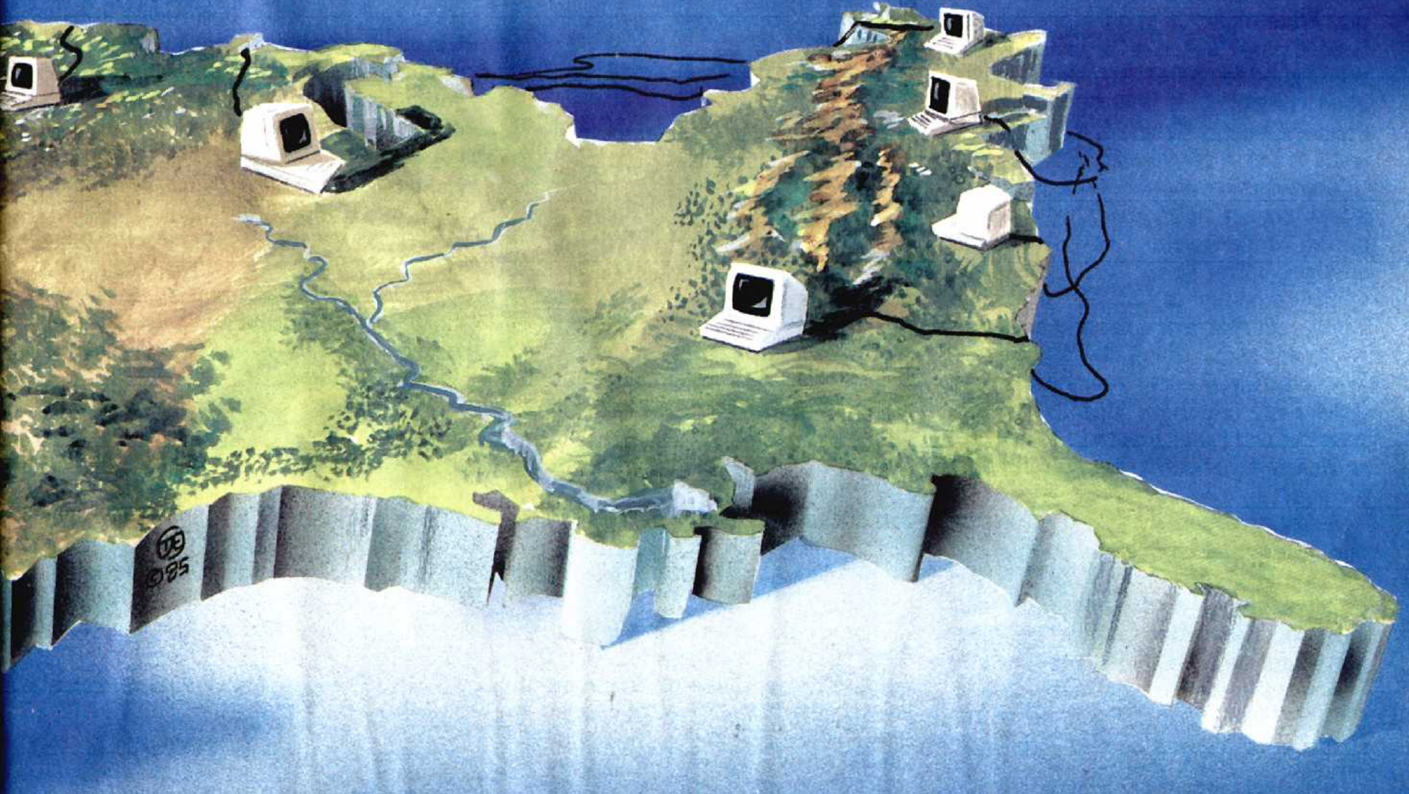
also excellent sources for leads as is the Computer Directory (800-255-5550) for special interest groups. Most boards let you try them out for free, some have sign-up fees and others merely ask for contributions.

One of the first things you'll learn when you start "logging on" (computerese for connecting to an on-line network) is that these boards are linked up with similar units across the country. While they do offer some of the conveniences of larger outfits like CompuServe or The Source, this is not the domain of the cost-conscious, time-pressured business person. It is possible to gain something prosaic through bulletin boards, but they also are vast sources of entertainment, amusement and, at times, enlightenment. Most run in a relaxed, informal fashion. Take your time. Wander around the menus: upload, download, break for awhile and then return for a chat.

**"Nancy Reagan," suggests one BB user, "thinks the third world refers to K Mart."**

If you're looking for pirated game programs, have this dream about breaking into the Pentagon defense system or wouldn't mind learning how to transfer bank funds to your private account, you're likely to be disappointed. "We don't use any ripped-off software," insists a representative of the San Leandro High School board. Foul language is discouraged and passwords are used to protect user privacy.

God, parenting, computer service, computer etiquette, games and freeware were just some of the staples found on some of the boards I checked out. If you're new to these services, you might be surprised at how difficult they are to reach at times. About all you can do is go on auto-redial, sit back, and wait your turn. If my experience is any indication, the worst time to log on is after dinner. The best? Early in the day or on a weekend.



# ASCII

Anxious to keep prices down and sample free services (or at least those run on a volunteer basis), I logged on to the San Leandro High School Open Campus line. A directory took me to study hall, the lunchroom and the principal's office. Predictably, the latter included this lecture from the school's leader:

"I do react quite negatively to people who like to pretend that play is a serious effort to learn when, in fact, it is not much more than screwing around. It especially irritates me when those playful endeavors cause me to spend time — like today when I spent one hour to fix the system. But enough said about spoiled brat behavior."

Talk about spoiled brats. Take a look at the War Line. Here, the kids have been dumping on one of their classmates who seems to have a thing for Atari. "He can't even spell right," declares one of his detractors. "Tipical [sic] for an Atari owner. Why are such dingy people allowed on the board. Please leave him E Mail. Maybe we can get this jerk off this board and on the Sesame Street board where he belongs."

In his own defense, the victim messages back that his critic "must be a little pig. What music do you listen to? Bald-headed punk? When is the last time you read a good computer magazine? I have a good computer. It doesn't have much memory, but my IQ is 124. P.S. Anyone, want to buy a computer?"

These kind of comments clearly upset a few "concerned mothers" who logged on the Motherboard. "Haven't you got anything better to do than argue about which computer is better?" one mom wondered. "Have you thought about the worry and strain you're causing mother? Why aren't you doing your homework? Grades are important, dear. You know your dad and I want you to go to college, and haven't we been trying to do our best for you?"

A negative note was also struck by one young San Leandro H.S. student. Particularly put off by "Bob," she scolded: "Keep your fantasies in your lonely bedroom. Don't embarrass yourself by telling me about them."

A word to the wise also turned up on Parents Place bulletin board, a resource network for parents of young children. Run by a Jewish community service agency, this network offers advice about childrearing. "What's it like handling a little baby when you're clumsy? I'm afraid I'll drop her. Can you ever tell why she's crying? When does she first recognize you? Is dad doomed to be less important than she with the breast?" "Babies have different cries," came a partial response, "it depends on whether they're hot or cold."

One of my favorite finds was Fidonet, a Sanyo owner's bulletin board that offers writer Ray Orrock's unique computer dictionary. According to Orrock, "interface" is a "term deriving from the Latin words *inter*, meaning "between," and *face* meaning "face," thereby translating to "Between Your Face." A "terminal printout" is defined as a "fatal disease affecting newspaper columnists."

> If you're looking for pirated software, dream about breaking into the Pentagon defense system or wouldn't mind learning how to transfer bank funds to your account, you'll be disappointed.

One of the interesting features of these public domain boards is that there are few prerequisites for membership. For instance, San Mateo Computers For Christ explains that "you need not be a Christian or agree with me or Christianity to use this board. All I ask is a little respect and that you don't mock Christianity or any other belief system."

Politics, particularly the Central American variety, is front and center on the Newsbase board. In addition to up-to-date reports from the battle zone, there are occasional references to the White House. "Nancy Reagan," suggests one correspondent, "thinks the third world refers to K Mart." Newsbase also maintains a joke file filled with old standbys like "Ascii and you shall receive" and "Is it OK to yell movie in a crowded fire house?"

While none of these boards are commercial databases, many offer advice, references to good articles, items for sale and, at times, online guidance. Though Sysops (system operators) can be difficult to locate, they usually check in at some point to answer messages, send out informational brochures to first-time callers and do required maintenance. Leave a message and you'll probably get an answer in your electronic mailbox the next day.

Another thing I like best about these bulletin boards is the fact that most contributions are short and to the point. Creative people sometimes have a tendency to go on and on, but most online contributors, perhaps because of the cost of connect time, are wonderfully concise. I particularly liked this exchange during a "True Adventures" session on the Motherboard:

*It was just me and my friend Burt Goodguy, and our guide Shinsplint against the mountain that night. As the snow swirled around us, I asked Shinsplint if he thought we would make it through the storm.*

*"Of course," he said, "we'll get out alive."*

*Just then I heard the sound of animals howling outside the flap of our tent. "What's that noise?" I asked quivering.*

*"That's the ROM Pack," said Shinsplint.*

*I'd heard about the ROM Pack and knew that if we didn't act fast they would be on us.*

*"What do we do now?" I demanded of Shinsplint.*

*Continued on page 82*

## Looking for Computer Entertainment?

If you have trouble finding COMPUTER ENTERTAINMENT at your local newsstand or want to know where to send a friend to pick up a copy, the following will help. It's a list of retail stores across the country that carry COMPUTER ENTERTAINMENT every month.

**ALABAMA**
Video Box Office, Birmingham

**ALASKA**
Byte Store, Juneau

**ARIZONA**
CG Appliance TV & Video, Casa Grande
Hollywood Connection, Phoenix

**ARKANSAS**
National Video #04001, North Little Rock
Pine Bluff Video, Pine Bluff

**CALIFORNIA**
Video Station, Alameda
Video Cross Roads, Anaheim
C & W Video, Carmarillo
Video Connection, Citrus Hts.
Video Station, El Monte
The Works, Eureka
Coast Video, Fountain Valley
Video Station, Fremont
Video To Go, Gardena
Hip Pocket Book Store, Garden Grove
Happy Home Merchandiser, Granada Hills
Picture Show, Huntington Beach
Video Station, Laguna Hills
Back Stage Video, Long Beach
K Sight & Sound, Los Angeles
Pirates Cove, Monterey Park
20th Century Video, Newark
Video Plus, Novato
Electronic Games, Orange
Sound Machine, Orange
Software Central, Pasadena
n Home Video, Riverside
Video Station, Rowland Hts.
Video Games N Gadgets, Sacramento
Videoland, San Francisco
Games Gags Gifts, Tahoe City
Video Etc., West Covina

**OLORADO**
weet's Tapes & Records, Aruada
merican Home Theater, Colorado Springs
uys N Dolls Video, Denver
rogram Store #7806, Littleton

**ONNECTICUT**
ideo Connection, Bridgeport
ideo Studio II, East Winsor
ideo Connection, Fairfield
ostalgia World, North Haven

**ELAWARE**
ideo Station, Wilmington

**LORIDA**
ectronics Depot Inc., Alamonte Springs
eace Chief Sound Center, Bradenton
ort Myers Video Movie Center, Fort Myers
omputer Image Software Centre, Miami
he Crossings Video Shop Inc., Miami
ff Vid Inc./DBA Video Club Center, Miami
range Blossom Hobbies, Miami
SL Electronics Inc., Miami
deo Trends, Winter Haven

**EORGIA**
l Star Electronics, Atlanta
deo Connection, Marietta

**AWAII**
ata I Microcomputers, Honolulu

**AHO**
ountain Video, Black Foot

**LINOIS**
AC Video Saw Mart, Belleville
evon Hobbymodels Inc., Chicago
Repair, Chicago
deo Tape Gallery, Chicago
deocourt, Cicero
enwood Distributors, Collinsville
ftware N Stuff, Collinsville
untryside Home Video, Countryside
ectronic Playground, Decatur
deo Dimensions, Des Plaines
deo Show, Des Plaines
deo Comp. Inc., Evanston
rcle Communications, Forest Park
deo Basics Inc., Joliet
nilworth Video, Kenilworth
Video Rangers Inc., Morton Grove
RJ Hobby & Electronic Center, Murphysboro
Classic Video, Oak Lawn
Sound Warehouse, Oak Lawn
New World Games, Rockford
Video To You Inc., Shaumburg
Toytown, Springfield
Video Hotline, Winnetka
Pace Micro Software, Wooddale

**INDIANA**
World of Video, Indianapolis
Video World, Kokomo
Video Place, Merrillville
Video Exchange, Mishawaka

**IOWA**
Video Island Ltd., Davenport

**KANSAS**
Hollywood At Home, Overland Park

**KENTUCKY**
Videovisions, Louisville

**LOUISIANA**
Ann's Video Junction, Slidell

**MAINE**
Sound Track, Sanford

**MARYLAND**
Video Connection, Beltsville
Video Connection, Bowie
Clinton Video Ctr., Clinton
Video Connection, Cockeysville
Video Works, Ellicott City
Video Connection, Olney
Reistertown Video Inc., Reistertown
Video Outlet, Silver Springs
Computer Connection, Taneytown
Greetings & Readings, Towson
Computer Answers & SVC, Waldolf

**MASSACHUSETTS**
Acton Video, Acton
Game-Tech, Arlington
Name Of The Game, Boston
Video Connection, Burlington
Act 1 Video Inc., Dracut
Video Plus, Framingham
Video Exchange, North Andover
Taylor Sound Inc., Pittsfield
Video Paradise, Plymouth
Freeze Frame Inc., Saugus
Video Barn, Somerville
TV Game Traders, Springfield
Good Vibrations, Stoughton

**MICHIGAN**
Edge Connector, Clio
Motor City Drugs & Video, Dearborn
Alexander's Book Store, Detroit
Mousetrap Video, Detroit
Just Software, East Detroit
Video Connection, Farmington Hills
Video Today, Holland
Home Video Outlet, Lansing
Video Phile, Lapeer
Video Connection #140, Madison Hts.
Signal Service, Napoleon
Pro Video, Okemos
Chi Town Records, Oscoda
New Horizon Book Shop, Roseville
Mettron, Saint Clair Shores
Record Cellar, Sterling Hts.
Maxaron Corp., Warren
Rite Way Ents., Warren
Top Stop T Shirt Co., Warren

**MINNESOTA**
Adventures In Video, Crystal
Games By James, Edina
Discount Video, Minneapolis
Games By James, Minnetonka

**MISSISSIPPI**
Take-One Video, Long Beach

**MISSOURI**
National Video, Kansas City
Curt's Computers, Palmyra
Harvest Plaza Video, St. Charles
Liberty Sound, St. Joseph

**MONTANA**
Curtis Mathes Entertainment, Billings

**NEVADA**
IC Electronics, Las Vegas

**NEW HAMPSHIRE**
Video Biz of New Hampshire, Bedford
Home Video Shop, Seabrook
Video Station Inc., South Merrimack

**NEW JERSEY**
Software City, Bergenfield
Video Aids Inc., Bloomfield
Video Vision, Bridgeton
Trash Or Treasure, Budd Lake
Gemini Enterprises, Cedar Knolls
Video Connection, Cherry Hill
O'Johnnies, Clark
Accent On Video, Closter
Video Store, Elmwood Park
Video Trek, Fort Lee
Camera Video Showplace, Freehold
Nu-Video, Lakewood
Video Junction Inc., Leonia
Video Home Center, Maralapan
Video Track, Marlboro
DC Video Inc., Manasquan
Ippy's, Manasquan
Video Studio, Metuchen
Video Access, North Bergen
Video Fantasy, Palisades Park
Stan's Discount Energy & Video, Penns Grove
Record Record, Pompton Lakes
Software City, Ridgefield
Video Connection, Somerset
Video Station, Somerset
Software Store Inc., Somerville
Video Galaxy, Turnerville
Captain Video Inc., Vineland
Opening Night Video, Wayne
Video Odyssey Inc., Woodbridge
Video Valance, Woodridge

**NEW YORK**
Video Connection, Albany
Videovision, Baldwin
Future Video, Bayside
Video Visions, Bayside
Videotronics, Bronx
Discount Book Warehouse, Brooklyn
Ekron Systems, Brooklyn
Flatbush Video, Brooklyn
Parkway Video & Electronics, Brooklyn
Taso's Video Fair, Brooklyn
Video Store, Brooklyn
Video Connection, Cedarhurst
Moriches Vantage Mart, Center Moriches
Video Emporium, Coram
Anytime Video, Deer Park
Video Connection, Delmar
Video Connection, Derby
Video Connection, East Northport
Video Quest, Elmont
Tanel Electronics, Floral Park
Video Network, Floral Park
Audio Video Barn, Blushing
Video Network Center, Flushing
Video Wizard Inc., Flushing
Magic Video, Forest Hills
Video Statio, Forest Hills
NSB Video, Franklin Square
Big Apple Video, Glendale
Video Etc., Great Neck
Huntington Video & Computer, Huntington Sta
Video Enterprise, Kenmore
ACE Camera Shop, Lawrence
Castle Video Inc., Lindenhurst
Kaleidoscope, Liverpool
Delman Television Co., Long Beach
L V R Video, Manhasset
Ankar Video Inc., Merrick
Video Connection, Merrick
Video Connection, Middle Village
HM Electronics, Nanuet
Captain Video, New City
Future Video, New Hyde Park
Leigh's Computers, New York
Mau Corp, New York
Video Connection, New York
Software Supply Int'l. Inc., Niagara Falls
Ozone Park Video, Ozone Park
Commander Video, Port Chester
Video Adventure, Pound Ridge
Video Breakthrough, Riverhead
Video Den, Scarsdale
Video Entertainment, Sidney
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Video Station, Suffern
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Selgen Enterprises, Valley Stream
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Video Village, Whitestone
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**NORTH CAROLINA**
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21st Century Video, Durham
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Future Now, Cincinnati
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Magic Castle Video, Columbus
Video Game Express, Columbus
Video Plus Inc., Garfield Hts.
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American Video, North Olmsted
Cartridge Connection, Proctorville
Calypso Video, Toledo
Silver Screen Video, Wickliffe
Video Den, Willoughby

**OKLAHOMA**
Video Comp. Inc., Lawton

**OREGON**
Capital Audio Systems, Salem

**PENNSYLVANIA**
Captain Video Center Store #10, Aston
Video Connection, Dresher
Video Store, Levittown
Home Video Center Inc., Newton Square
Tonidale Arcade, Oakdale
Software Plus, Philadelphia
Video Games Plus, Philadelphia
The Video Inn, Philadelphia
Video Connection, Quakertown
International Video York, York

**PUERTO RICO**
Video Vision #59, Guaynabo

**RHODE ISLAND**
Video Connection, Johnston
Video City, Providence

**SOUTH CAROLINA**
Carolina Video Center Inc., Charleston
Game Exchange, Greenwood
All That's Video, Spartanburg

**TENNESSEE**
Radio Service Center, Nashville
Video World, Nashville
Totally Video, Smyrna
Sneaky Snakes Elect., Somerville

**TEXAS**
TV Center, Abilene
Pantego TV, Arlington
Vid-Com, Brownsville
Video Rainbow, Forth Worth
Wedgewood Rental, Fort Worth
Audio Video Plus, Houston
VI-AM Video & Bookstore, Houston
TV Games Limited, Midland
M & M Elect. Sales & SVC, Synder
Lonestar Video Rentals, Vidor

**VERMONT**
Video Connection, Brattleboro

**VIRGINIA**
Video Station, Alexandria
Mr. Franco Printing & Newsstand, Arlington
Video Shop Inc., Manassa
Video Station, Roanoke
Video Express, Virginia Beach
Combs Distributing, Winchester

**WASHINGTON**
Video Space, Bellevue
Kent Video & Computers, Kent
Platnium Sound, Seattle
Video Int'l. Corp./DBA Video Hut, Seattle

**WEST VIRGINIA**
Computers Plus Inc., Charleston
Tronix, Charleston

**WISCONSIN**
Video Exchange, Glendale
Phantasy Age Inc., Lacrosse
Total Eclipse, Mehomonee Falls
Ford Theatre Home Video, Racine
Galaxy TV Games, Racine
Drakes Super Valu, Salem
Video Place, South Milwaukee

**WYOMING**
Clark Co., Cheyenne

**CANADA**
Video Games Galore, Courtney, British Columbia
Home & Business Computer Ctr., Mississauga, Ontario
Future Shop, Vancourver, British Columbia
Riverside Products, Whitehorse, Yukon Territory
Red River Book Shop, Winnipeg, Manitoba

# "I Thought You Brought The Torches"

By DAVE ALBERT

*Every fantasy role-playing game is designed to be winnable, although it may not seem that way when you're seven levels below ground, all your characters have been poisoned and there's not a healing spell in sight.*

The most commonly voiced complaint about fantasy role-playing (FRP) games is that they are frustrating and too hard to get into. For the player who approaches them as exercises in brute force, where anything that moves is a target, this is often true. However, if you undertake them as tests of your wits and powers of observation, you'll probably discover them to be rewarding and addictive. Success in these games depends almost entirely on the intelligent use of resources. If you begin a game without carefully balancing your characters and equipment, death and the "game over" message become all-too-frequent companions. Designers rely on your impatience and carelessness to supplement their traps and pitfalls. Remember the cardinal rule of playing FRPs: you are smarter than the opposition. You can decide when to take chances and when to play it safe; you can evaluate odds and try to tip them in your favor by judicious use of terrain, equipment, magic, and weapons. The spoils of victory will always go to the best resource manager.

Fantasy role-playing games are the only ones in which the characters grow multidimensionally. In action/arcade games, characters grow only in terms

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of adding lives, ships, blasters, or whatever — the entire game is encompassed by the concept of escalation. In adventure games (*Zork*, *Transylvania*, *Deadline*, *Wizard & Princess*, etc), your character is fixed — he has only the skill you bring to the game yourself — and remains unchanged except for the spells he picks up. War games are perhaps the closest relatives of FRPs, since they also rely heavily on the intelligent use of resources — troops, aircraft, artillery, and so forth. They differ from FRPs in that the resources are almost always limited and non-renewable — player innovation is generally confined to tactical maneuvers. The joy of FRPs is that the possibilities can be virtually limitless. Your character, through the acquisition of experience and by virtue of survival, changes constantly. He can grow in personal power and wealth and can also muster a host of resources that constantly change in number, nature, and utility.

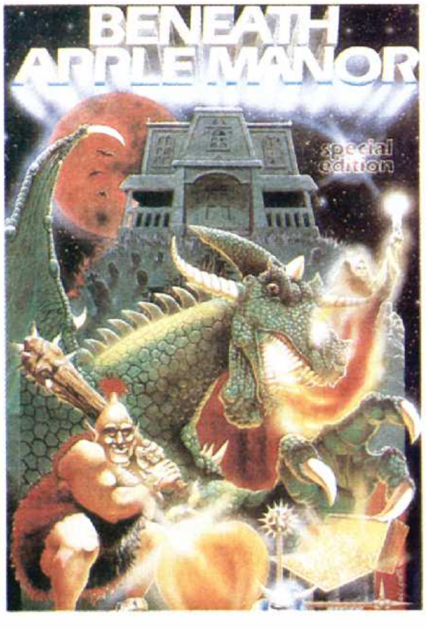
In most FRPs the player begins with a character — or a party of characters — and must choose a profession. Traditionally, these are warrior, wizard, and thief in the sword & sorcery genre; or pilot, mechanic, and engineer in space-opera scenarios. These characters are delineated by a set of variable characteristics such as strength, intelligence, wisdom, pilot skills, prestige, etc., which the player must define at the outset by allocating points to each category. Generally the number of points in a specific category will in turn define the possible profession(s) of the character, so the first hard choice is the distribution of points — a poor choice dooms the character or party from the outset. After all, who needs a clumsy thief or a wimpy warrior who can't so much as lift a dagger?

Once the character is defined, there's

# "I Thought You Brought The Torches"

the problem of equipment: A fighter with no armor or weapons is a sorry spectacle against angry orcs. Most FRPs have some sort of monetary system that allows you to accumulate goods from local merchants, provided you can lay your hands on some cash. You usually begin with just enough money to buy the most basic equipment. All decisions you make in defining your character and making sure he has the tools of his trade will affect chances of survival — should you create a superhero by spending all your cash on exotic weapons, or try defensive tactics and go for that expensive armor? Offensive power is usually the path to rapid character growth, while defensive power reduces your character's chances of becoming demon fodder . . .

Some games bypass this level of decision making by providing the player with a ready-made character and sending him straight off to a monster-infested dungeon to gather cash and experience. In Don Woth's *Beneath Apple Manor* (Quality Software), one of the earliest and most playable FRPs on the Apple computers, your character is defined by strength, intelligence, dexterity, and body. You can increase your hero's initial 20 points in each category by cashing in the experience points you earn by slaughtering monsters and gathering gold pieces. The trick is to slaughter the monsters with the very meager tools you're given at the outset. Some critters drain your strength — lessening the severity of your own blows — while others simply whack hunks out of your character in quantities that would make Shylock blush. Once you've vanquished a slime or two, you'll have a few experience points to distribute among your characteristics. If you want to concentrate on casting spells, you beef up intelligence; if you found some gold and can purchase a handy ax or sword, raising strength guarantees you quicker kills. Sounds like your choices are pretty straightforward, right?

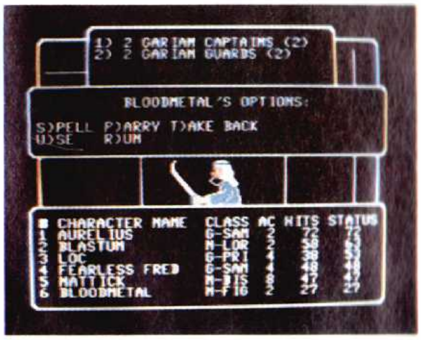


However, in *Beneath Apple Manor*, as in most FRPs, the different characteristics serve multiple functions. Intelligence also governs the ability to cast healing spells that can repair the damage done by unfriendly beasts and permit you to randomly teleport elsewhere in times of utmost danger. Strength lets you break down doors and carry ever-greater amounts of gold. Dexterity determines how difficult you will be to hit (along with the armor on which you squandered your hard-earned cash) and how good your chances are of landing a blow on whatever happens to be chewing on your leg at the time. Depending on your fighting style, either strength or intelligence will raise your offensive power, while dexterity ensures that you can use it to best effect. Where do you add the points? This reduction of the game's essence to one central question makes *Beneath Apple Manor* perhaps the best training ground in existence for novice FRP players. It is simplicity itself to paint yourself into a corner by neglecting a single character trait for any length of time. Poor resource-management guarantees short (and frustrating) games every time.

The more sophisticated FRPs raise the resource dilemma to even greater heights. There are dozens of choices — most of which are critical — to be made in equipping characters. Each weapon has its virtues and drawbacks — more damage, but harder to wield; or heavy damage potential but of limited effectiveness. One type of armor might offer only minimal protection but be easier to move around in, while another kind might weigh tons but can only be breached with a howitzer. This is where magic becomes part of your strategy. In games like Andrew Greenberg's and Robert Woodhead's *Wizardry* (Sir Tech) or Lord British's *Ultima III* (Origin), there are two classes of magic — clerical and mage — with dozens of spells of varying levels and potency. The more frightening spells can be used only by characters who have increased their powers by surviving a great many encounters with their enemies and garnering a lot of experience. But spells are usually limited in number — you can only cast so many before resting. Thus, the player must carefully monitor the use of magic to guarantee having real punch when it is needed. In *Wizardry*, it doesn't do much good to blast your way to the eighth level of the dungeon if you don't have any spells in reserve to waylay the occasional goblin on the trip back. In *Ultima III*, running out of food while underground or far away from a town is a quick path to a permanent end. These are among the most common mistakes a player can make.

Sometimes a single resource can be the key to others and thus of paramount importance. In *Xyphus* (Penguin), by

WIZARDRY (SIR-TECH)



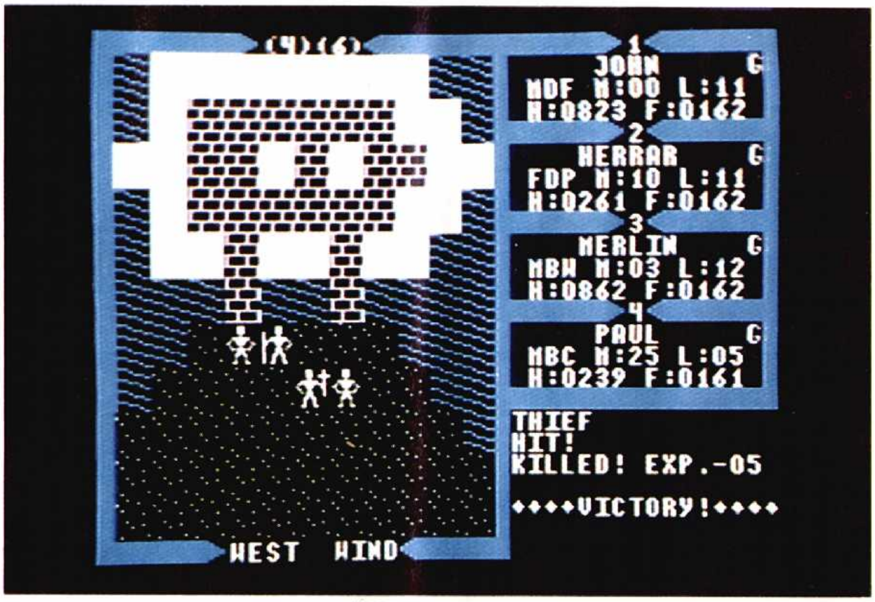
```
1) 2 GARIAN CAPTAINS (2)
2) 2 GARIAN GUARDS (2)

        BLOODMETAL'S OPTIONS:

S)PELL  P)ARRY T)AKE BACK
U)SE    R)UN

# CHARACTER NAME   CLASS AC HITS STATUS
1 AURELIUS         G-SAM  2   72   72
2 BLASTUM          N-LOR  2   50   63
3 LOC              G-PRI  4   38   38
4 FEARLESS FRED    G-SAM  4   48   48
5 MATTICK          N-BIS  8   47   47
6 BLOODMETAL       N-FIG  2   27   27
```

**Offensive power is usually the path to rapid character growth, while defensive power reduces your hero's chances of becoming demon fodder.**



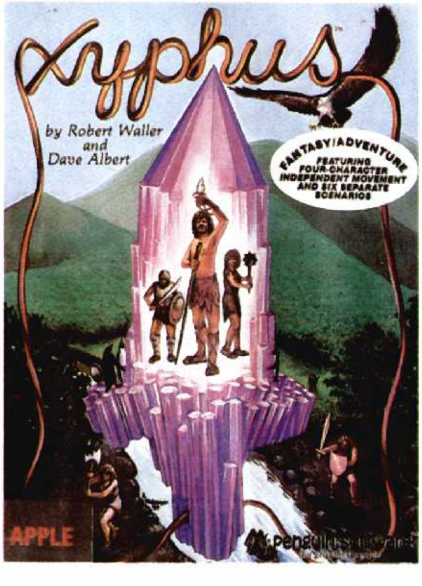
```
(4)(6)
              1
             JOHN        G
         MDF M:00 L:11
         H:0823 F:0162
              2
            HERRAR       G
         FDP M:10 L:11
         H:0261 F:0162
              3
            MERLIN       G
         MBW M:03 L:12
         H:0862 F:0162
              4
             PAUL        G
         MBC M:25 L:05
         H:0239 F:0161
THIEF
HIT!
KILLED! EXP.-05

****VICTORY!****
WEST WIND
```

ULTIMA III (ORIGIN)

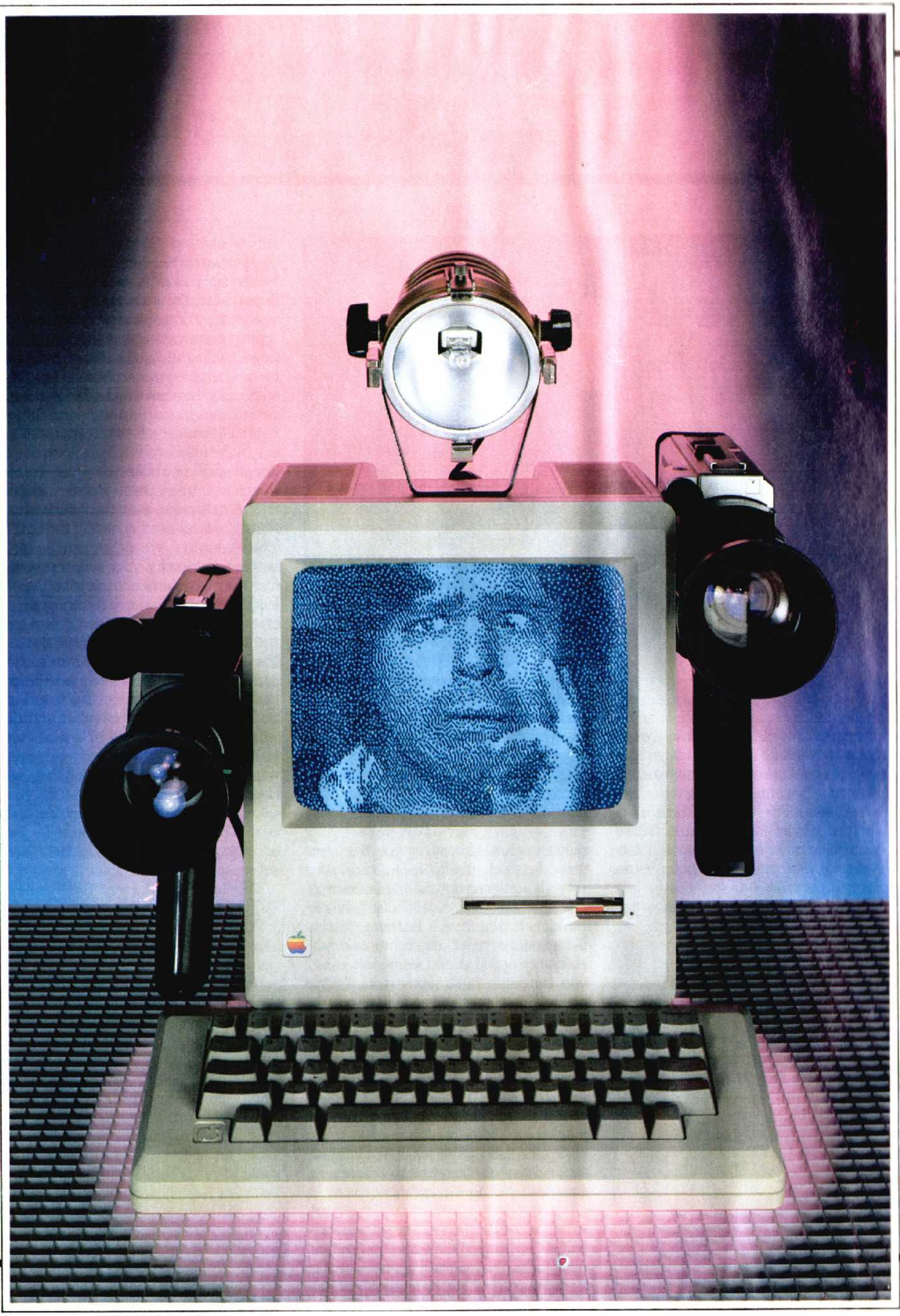
Skip Waller and the author, you must have an amulet in order to cast spells — and the amulet contains a limited number of charges. This means you have to keep track of how much magic has been used to avoid running out at an inopportune moment. Besides having to make choices when resources become available, the player must monitor the resources and make frequent decisions on whether or not to sacrifice potential for instant firepower.

In most cases, different types of terrain serve as obstacles in FRPs. All the classic dungeon games contain secret doors where passage is permitted if the player is astute enough to figure out where the door is. But terrain can also become a resource if you're careful enough in figuring out how to use it. In *Caverns of Freitberg* by Dave Shapiro, you can lure normally devastating monsters into spots where they are powerless yet vulnerable to attack. All it takes is to figure out the monsters' modus operandi. If one particular monster can only attack from a distance, just sidle up nearer to it (keeping some obstacles between you and your prey) until you can jump right next to it. *Xyphus* makes you aware of terrain factors, by limiting the movement of each of the three possible character races on different types of terrain. In a racially mixed party of four, some of the characters will slow the party down, while others can decoy slower monsters away from the injured. In some instances there are places the party must reach that can only be approached by certain characters. Obviously, a poorly balanced party is doomed.



In some FRP games, the principal resource is weapons, with character development or magic taking a back seat to the acquisition of better technology. This is particularly true of the futuristic space operas such as *Galactic Adventures* by Tom Reamy. Set in a future where interstellar travel is commonplace and aliens roam the streets, this game pits your team of interplanetary mercenaries against enemy groups in a variety of settings. While the game suffers from a lack of overall thematic cohesiveness, the combat system is a wonderful exercise in resource management. Protracted fights in obstacle-strewn terrain can result in the exhaustion of your weapons or ammunition, without you ever getting the chance to engage a missile-wielding enemy in hand-to-hand combat. In situations like this, position is half the battle. The enemies' weapons can be preemptive, stunning your characters before they have a chance to strike. A poor leader who has his troops firing simultaneously — and being forced to reload without benefit of friendly fire to distract the enemy — will see his team quickly neutralized. Dexterity becomes the critical resource — if your party is without at least one speedy member, battles with berserk robots will be over before you can heft your phaser. A smart leader will equip his troops with good long- and short-range weaponry, and use each alien race according to its physical abilities. This strategy can result in your becoming invincible after a half-dozen successful battles.

The fact is that *every* FRP game is designed to be winnable, although it may not seem that way when you are seven levels below ground, with all your characters poisoned and not a healing potion in sight. You are the hero here, and should be able to win by virtue of your one true advantage over any computer opponent you will ever face: You can think. Your opponents can act on an "instinctive" level, following more or less complex, rigid patterns. If you fall into the trap of acting like the enemy, they will often overwhelm you with sheer brute force. If you think ahead, you'll have the edge. If you find something you haven't seen before, try fitting it in with what you've experienced already in the game. There's generally a purpose to everything in an FRP — the trick is to figure out just what that purpose is. Above all, use every available resource—that's why it's there. **ce**



# BOOT & SHOOT

## Realize your wildest digital dreams with MacVision and Thunderscan. Get the picture?

By TIM ONOSKO

How many times has someone demonstrated a microcomputer program for you and raved about its "great graphics?" And how many times were those "great graphics" really anything but? Was that supposed to be a rocket? Or a rock?

The simple fact is that most microcomputer graphics are terrible. For the most part, the images produced by video games and personal computers aren't as good as a well-executed design in needlepoint. Their very low-resolution pictures force us to use our imaginations. When we see a pile of square blips on a video screen and the program tells us that it should be a little guy with a hat on, we believe it — even though it looks more like a duck.

Well, all that is finally changing. Apple's Macintosh is the first of a new breed of "supermicros" that places heavy emphasis on graphics. Others racing to market include Atari's new ST line of Mac-like machines, and Commodore's forthcoming graphic computer, the Amiga. Both use the same fast Motorola 68000 microprocessor as the Macintosh, and all offer substantially better screen resolution than the current batch of affordable home machines. Better resolution means that we'll need to use our imaginations less to get the picture.

History may one day note that the Macintosh was the first computer to be sold by a tennis shoe. That's right. Think back and you may remember the very first advertisements with which Apple introduced the Mac. They featured a fairly well-drawn tennis shoe demonstrating its graphic capabilities. No one knows how many buyers tried to duplicate that picture, but it's a safe bet that practically nobody could. Even though Bill Atkinson's famous (and essential) *MacPaint* is one of the cleverest pieces of micro software ever created, it's still time-consuming and difficult to produce a good-looking picture with it. And drawing with the Mac's mouse pointer can be frustrating — something like trying to engrave with a jackhammer.

What was needed from the start was a way to bring the world outside the Macintosh into its memory.

# BOOT & SHOOT

COMPUTEREYES™
by
DIGITAL VISION
COMPUTEREYES
by
DIGITAL VISION

**Computereyes lets you digitize images using a Commodore 64 or Apple II series computer.**

## THE VIDEO CONNECTION

The most obvious solution to capturing great images on the Macintosh is video. If there were only a plug on the back of the case for a video camera. . .

Moving a video image to a computer, however, isn't an especially easy task. Video is an analog signal, and micros can only decipher binary digits—ones and zeros. While a TV picture is "painted" on a phosphor screen with a rapidly moving electron beam, computer video is comprised of dots or "pixels" (for "picture elements"), each of which is a direct interpretation of a number in its memory. Technically, the area in a computer's memory devoted to the video graphic display is called a "frame buffer."

To convert a video signal to something that the computer can understand as a picture, the tiny variations in the analog signal must be turned into ones and zeros. And, since a video signal can contain shades of gray (as well as colors, of course), a special program must tell the computer to clump black and white dots together in a specific way to convey this illusion as well.

That's the job accomplished by Koala Technologies' *MacVision*, which, in effect, gives the Macintosh the "video in" socket Apple forgot to include. Inside the small (six- by eight-inch) box are high-speed electronics that send a steady stream of ones and zeros to the computer via one of the two serial ports, either the RS-232 (telephone modem) port or the Imagewriter (printer) port. Software, written by *MacPaint*'s author, Bill Atkinson, (also a principal architect of both the Macintosh and Lisa) dissects the numbers, rearranges them into a recognizable picture and spaces them apart to simulate gray tones. *MacVision*'s video source can be virtually anything — a videocassette recorder, a videodisc player or even another computer — although most people will probably use it with a black-and-white or color video camera. Everything connects via an RCA-type plug on the *MacVision* box.

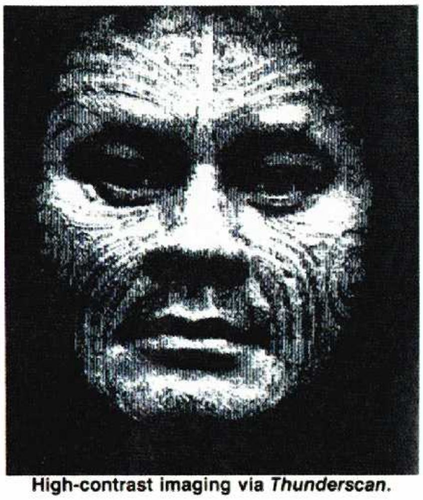
The *MacVision* device strips the video signal of color information and uses only two other controls for adjusting the contrast and brightness. Power for the circuitry comes directly from the Macintosh itself, and the box is styled, textured and colored to almost perfectly match the computer.

If the *MacVision* hardware is simple and elegant, so is Atkinson's software, which installs itself as a "desk accessory" on the "Apple" menu, along with the well-known calculator, scrapbook, notepad, alarm clock, etc. In this way, *MacVision* is always "live" on-line and can be accessed while operating in any other program, such as *MacPaint* or the *MacWrite* word processor. Video "snapshots" can be moved into any software by cut-and-pasting to and from the computer's "clipboard," or can be saved to disk as a *MacPaint* document.

The *MacVision* software is extremely simple to use. It offers only a few essential commands from its own pull-down menu at the top of the screen. You can choose to scan an entire screen (with a resolution of 512 by 342 pixels) or a "window" that is about half the screen size. In each case, the software automatically scales the video signal so that it fills the proper frame. (In other words, the smaller window is a reduced version of the full screen, not a portion of it.)

Since video offers a continuous, moving image and the computer displays only still pictures, *MacVision* demands that objects stay stationary in the frame while it digitizes. Considering the computation necessary, the software is reasonably fast; a window takes approximately 5 seconds to scan, and a full screen takes about 17 seconds. This makes *MacVision* the electronic equivalent of the Daguerreotype—human beings must be still for their portraits. Though this is the system's major limitation, it only slightly inhibits *MacVision*'s usefulness in practice.

Full-screen *MacVision* pictures can be saved to disk. Windows, however, must be cut (a "marquee"-style frame can be used to select only a portion of a window



High-contrast imaging via *Thunderscan*.

or screen) and pasted to the clipboard or scrapbook. Both windows and screens can be printed immediately from the *MacVision* program, as well.

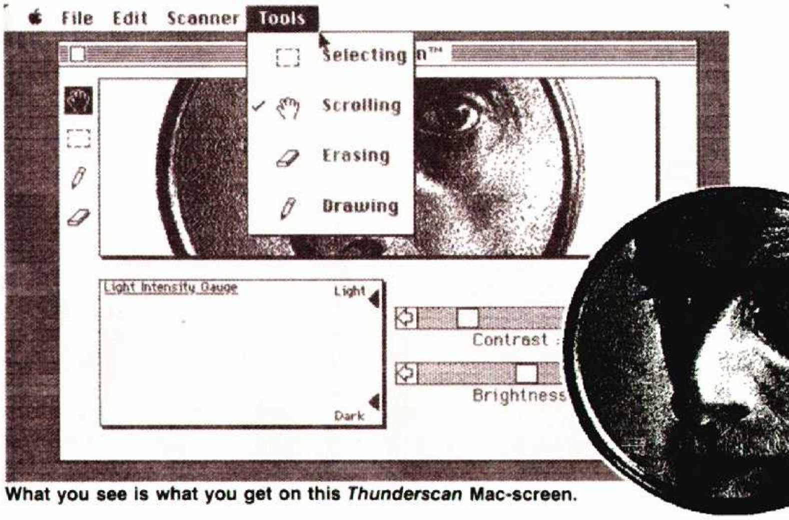
The results from a *MacVision* system and even the most inexpensive video camera are impressive, considering the limitations of the computer's resolution. Printed, halftoned photographs consist of approximately 150 to 300 dots to a horizontal inch, and the dots that make up these kinds of photo reproductions vary in size. *MacVision* simulates a gray scale by varying the spacing of dots of only one size in much the same way that the "pointillist" painters created their images. (Resolution, too, is less than 100 dots per horizontal inch.) Up close, a *MacVision* picture — either on the video screen or printed on paper — looks fuzzy and indistinct. But stand back a foot or so and it takes on a much more lifelike appearance.

All in all, *MacVision* is . . . well . . . incredible fun. The gratification of capturing and seeing images taken with a video camera, then working on them with *MacPaint* and putting them into all sorts of printed documents, is both great and immediate. The applications for fun and productivity are, as Koala claims, limitless. From illustrating reports, to producing visual letters (complete with dialogue balloons), this is a product with enormous potential. And, because the hardware and software combination has been so very well thought-out, it is a prime example of the kind of innovation that the Macintosh generates.

## THE GRAPHIC CONNECTION

Another early image used in Apple's advertising (and in the Macintosh manuals) was a picture of an oriental woman brushing her hair, taken from a Japanese wood-block print. Like the tennis shoe, it was created by the company's in-house art staff. This image was not drawn by hand, but rather *digitized* directly from the paper print itself. (Apple designer Susan Kare, who is responsible for much of the Mac's art direction and many of the original icons and design elements, manipulated the image.)

The digitizing process, however, requires no separate video source. Instead, a photocell moves across a page, measuring the reflected light from an image and sending the information to the computer. Good examples of this kind of graphic input device are an electronic facsimile machine (the kind that sends documents via the phone lines, like Federal Express' new "Zap Mail" service) and the machines that transmit wirephotos to newspapers.



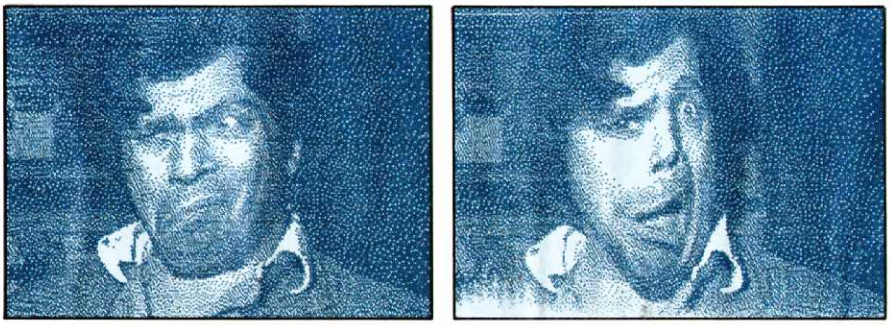
What you see is what you get on this *Thunderscan* Mac-screen.

Adapting this idea to personal computers is not particularly new. Several pioneering computer hobbyists used inexpensive photo diodes mounted on the printing heads of dot matrix printers to make nifty pictures for the Apple II and Commodore 64 computers as early as 1979. This type of cheap scanning video-digitizer is now available for the Macintosh as a commercial product.

*Thunderscan*, from Thunderware, Inc., consists of a simple electronic device mounted inside a plastic shell shaped much like the ribbon cartridge for Apple's Imagewriter printer. The scanner snaps in place of the ribbon and is connected to either the Mac's printer or the modem port by a thin wire cable. The "nose" of the plastic box contains an optical assembly which focuses the light from a red LED (light emitting diode) onto any paper picture rolled into the printer's platen. The scanner then reads the reflections of the light and sends them to the computer. The manufacturer claims that the system can differentiate among 32 different shades of gray. The only hardware addition that needs to be made is the application of a quarter-inch wide piece of white tape to the printer platen, which is used to optically align and synchronize the scanner.

The *Thunderscan* is *very* slow. A full 8½- by 11-inch picture takes about 14 minutes to digitize in its original size, because the scanner must travel the full width of the paper hundreds of times. (The software tackles the problem of moving it across the platen and shifting

*Continued on page 75*



## DISTORT YOURSELF

Software designer Guy Nouri should have know better than to pose for the far-left frame. The other four show how MacDraw can be used to alter images generated by MacVision.

# Load & Run

## A Discriminating Look at New Software

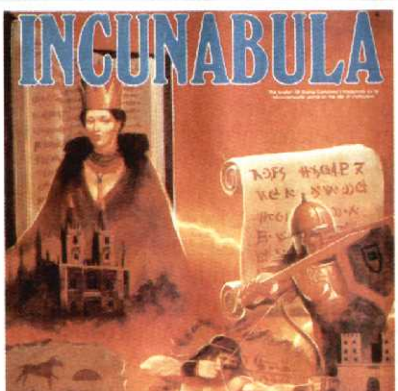
### INCUNABULA

*Designed by Steve Estvanik/*
*Expert Systems, Inc.*
*Avalon Hill, 1984/IBM PC,*
*PCjr (128K)/Disk/$30.00*

Remember *Hammurabi* and *Kingdom*? How about *Risk* and *Diplomacy*? Well, roll them all together — with liberal dashes of beautiful color graphics, well-designed and very convenient player features, plus some good documentation — and you've got *Incunabula*, the game that can let you turn a gaggle of uncivilized, half-naked savages into a mob of world-beating empire-builders.

This is not only Avalon Hill's usual class job, but a really fascinating strategy contest for a group of adult players. It does all of the things the games mentioned above do, and usually better. It looks pretty, and is easy to learn without being too simple. You can conduct either a desultory or an intense session (depending on the fiendishness quotient in the mob you get together); and there are plenty of opportunities for up to six players to show off their skills at contracting alliances, waging war, conducting trade, and other kinds of strategic thinking — without putting so much of a premium on any one skill that some folks always wind up being the duffers.

As the title implies, *Incunabula* mirrors the struggles of early Man to get out of the low-paying hunter/gatherer rut, and into the more-highbrow ratraces — agriculture, city-building, overseas exploration, etc. You and each of the other six players (there is always a total of seven; the computer plays one hand, plus any of the empty slots) start out with one primitive-clan population unit, represented by a token on the gorgeous, hexagonally-gridded terrain map of the mythical continent of Zaumulor. If your little clan is on a desert or mountain hex, it'll have to migrate to a plains or coastal hex in order to produce enough food to stay alive; if the grocery situation is okay, your numbers are certain to grow, so you'll have to begin ordering some migrations soon anyway, to avoid overpopulating the area. If you manage your population growth well, your wimpy clans will advance to tribe status, and set about founding some minor cities and producing surplus trade goods.



Eating, migrating, and making babies isn't all you'll have to deal with, though. Overpopulation, with such accompanying disasters as famine and plague, is a constant danger; so are civil wars and insurrections, earthquakes, and marauding Khans. To guard against these things, and generally enhance your people's gritty lifestyles, you, as Big Chief, must choose a "Basis of Law" — basically, a government model — from among three main choices: Theocracy, Oligarchy, and Utopia. Each has its own strengths and weaknesses. All need the purchase of "Arcana" — knowledge of things like mathematics, law, philosophy, and engineering — to run well and fulfill their purpose. Purchasing these technologies and branches of learning takes plenty of trade goods; producing the necessary goods takes a big population; and as soon as you start really expanding your population, you not only increase your exposure to dangers, but begin provoking turf-battles with your similarly expanding neighbors.

Forming alliances can help; so can a good defense, which involves establishing plenty of mines in the mountain hexes and learning to work iron. There's also canny trading, which can not only increase your supply of trade goods for Arcana purchases without too much extra population, but also maintain friendly contacts all around. Of course, if you have some cities on the seacoast, you can simply build a fleet and ship some of your inconvenient folks off to Terra Incognita. Meanwhile, try to keep your population at a level sufficient to defend yourself from the more bloody-minded of your player pals, who'll probably choose a Khanate as their basis of law (that's an option too). Remember: To win, you've got to completely fulfill your government system's knowledge requirements, maintain a certain population and number of cities, have a strong defense, keep everybody fed and producing goods, and keep all these balls in the air at the same time.

There's lots more detail in the game, but that covers the high spots. Basically, you'll get to try your hand at managing all of the more important concerns of any leading dictator. One especially nice touch is the system of "personalities" provided for the computer player(s); it's based on the medieval notion of "humors" — choleric, phlegmatic, melancholic and sanguine — and is not only charming and historically accurate, but often pretty important in actual play. Like I said: A class act here, and a perfect diversion the next time your particular tribe gets together.

*(William Michael Brown)*

### CHIPWITS

*Designed by Douglas Sharp and*
*Michael Johnston*
*Brainpower Inc.,*
*1984/Macintosh/Disk/$49.95*

Actually, the title of this program does it a disservice. When you read "*Chipwits*," you think, "Oh, a cute game about eating or something." Well, this game is far from cute. And it's far from a game. It deals with logic and programming, and robotics and truth tables, and philosophy and weighty matters but calling it *Principles of Truth Tables* or *Weighty Matters* probably would have put some people off. I, for example, have always thought a truth table was something it was your sister's turn to set. (I set yesterday.)

Actually, truth tables can be fun. And *Chipwits* does a crack job of making them so. The object here is to program a robot to perform certain tasks in the most efficient way. You do this by stringing together a series of chips. Each chip is composed of two elements: The Operator and The Argument, represented by icons. The Operator is generally an action (look for, smell, touch, etc.) while arguments are generally things (pie, coffee, bombs, and so forth). Each chip also has True and False tabs. Thus if the conditions of the command you've given are met, the course of action proceeds through the Truth tab. If it's false, it goes in another direction.

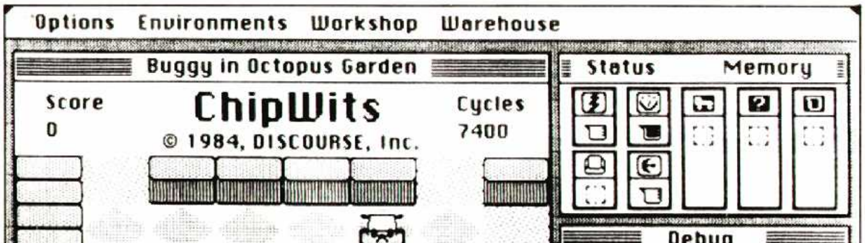
So, for example, you can program your robot to enter a room and look for a piece of pie. If he sees a piece of pie, he will then perform the next action in sequence connected to the true tab (e.g. pick it up). If he sees no pie, he'll perform the action connected to the false tab (e.g. turn).

Of course picking up pieces of pie is not all you are required to do here though, Lord knows, it's hard enough to get your robot to do this. There are eight "Environments" in which you can place your robot, and each has a different objective and different obstacles you must program him to deal with. There's coffee to drink, spiders to blast, and walls not to bump into. You must build intricate chains of commands designed to cover all contingencies.

This is all difficult. Very difficult. And the manual does nothing to make things easier. It's muddy and unclear and poorly put together. Adding to the problem is the fact that while it's easy to figure out what some icons represent (for example, the eye means "look for" and the nose "smell"), others are very obscure. Although there is a list of operators and a description of what they do, the column under the heading "ICON" is blank. They've left the icons out. Fortunately, there's a little shortcut card with pictures and definitions on it.

Unfortunately, even if you know what each symbol stands for, that doesn't solve everything. You still really have no idea how to put together a program. And nowhere in the manual is there a sample program that you can type in step by step to learn what does what. A brief tutorial like the one included in *Rocky's Boots* would have been more than helpful. As it is, your only recourse is trial and error. And this ruins an otherwise excellent program. There is so much trial and so much error, you might be tempted to pack it all in and go to the movies before you find out how gratifying it is to actually make your little robot pick up the pie. And that would be a shame.

*(Randi Hacker)*



Score 0

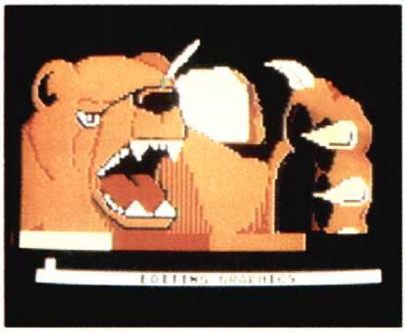
Cycles 7400

## ADVENTURE MASTER

*Designed by Christopher Chance*

*CBS Software, 1985/C-64/Disk/$44.95*

What adventure-gamer hasn't dreamt of creating an adventure of his own, taking place in a world subject to his every whim and desire? For that matter, is there anyone who hasn't, at one time or another, fantasized about being the omniscient creator of another universe? Probably not. And it is to these fantasies that *Adventure Master* caters.



*Adventure Master* is a design tool, a program that allows users to make both text and graphic adventures and then play them. If playing an adventure that you've designed doesn't sound terribly exciting, *Adventure Master* suggests getting together with a friend and designing adventures for each other. CBS might consider sponsoring an *Adventure Master* user's group where people could trade and collaborate on adventures. One could also use *Adventure Master* to design adventures for sale, though anyone wanting to use them would have to have a copy of the master program as well.

Writing the adventure game is divided into three distinct phases by *Adventure Master* — vocabulary, description, and testing. The first category requires you to make a list of all the acceptable commands and responses. The list can include a limited number of synonyms ('get' instead of 'take,' for instance), but for the most part, the program's vocabulary and meager two-word parser are relatively unsophisticated.

The description phase doesn't necessarily follow the creation of a vocabulary list; in fact, you may want to skip around between the various phases throughout the adventure writing process, a practice allowed by *Adventure Writer*'s high-quality network of menus. The entire program is menu driven, and all the commands are comprehensible and simple to use. Jumping from one phase to another is not only possible, but necessary. For example, if you create a description for a new room which contains a pig and a magic shoe. Right away, that's two more words for the vocabulary list — 'pig' and 'shoe.' In addition, such new verbs as 'wear,' 'ride,' and 'eat' may suddenly become crucial to the game, requiring you to amend the list of commands and responses.

In any case, whenever you get around to writing descriptions, you will have to write a short explanatory passage for each location and object in the game. These passages can be as lengthy, complex, and colorful as you want — a bomb could be described as a square, black box or as a "sinister, forbidding ebon cube radiating evil and danger."

The program also requires you to draw a map so that it can connect the various locations in its memory. This is a tedious process, though it's not quite as dreary as it is when playing an adventure game. Nonetheless, it is a good idea to do it at the start, getting it over with early.

Budding game designers should test their adventures at regular intervals, though perhaps not as often as the instruction manual recommends — playing through the opening of even the most brilliantly written adventure more than ten or fifteen times can get awfully boring. Since testing the game merely means playing it to find and eliminate any bugs, a wise designer would pass the task on to relatives, friends and anyone else in the neighborhood: after all, even professional game designers have playtesters to test their games.

Probably the best way to use *Adventure Master* is to construct adventures piece by piece, taking each design phase in small doses. Start with the map, then write a few descriptions, edit the vocabulary, save the game, turn the computer off and continue on another day. But the chances are that even if you do try to pace and vary the tasks, the tedium will start to set in just as soon as the thrill of actually creating an adventure game wears off. Sad to say, writing an adventure is nowhere near as much fun as playing one.

*Adventure Master* is by no means bad; in fact, certain of its features actually place it a step above most other construction sets for adventures. One such feature is the unusually legible character set and the attractive text-fadeout effect that occurs when the screen is cleared. Perhaps its most intriguing feature is that it allows you to prepare illustrations to go along with the text for certain rooms. In the graphics mode, you simply draw illustrations with a joystick and then assign them to locations in the game. The graphics and range of colors are nothing spectacular, but the illustrations do add another dimension to your adventures.

Nevertheless, the entire process is too much work in relation to the finished games. After all, a fantasy created with *Adventure Master* can contain no more than 32 objects, 50 rooms, 10 illustrations and only 100 words — a far cry from even the smallest commercial text-adventure.

*(Charles Ardai)*

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## ADVENTURE WRITER

*Designed by Graeme Yeandle*

*Codewriter, 1985/C-64/Disk/$39.95*

*Adventure Writer*, like *Adventure Master* (see above) is a construction set for text adventures. Unlike *Adventure Master*, *Adventure Writer* allows no illustrations and has clumsy, awkward menus—but its plot capabilities are far greater. Despite its simplistic parser, the vocabulary and understanding of commands and synonyms is far better than that of *Adventure Master*. However, *Adventure Writer* has one major flaw — it is infinitely more tedious and dull, and requires far more work, than any other construction set on the market.

In the end, *Adventure Writer* requires the same things that *Adventure Master* does — a vocabulary list, a set of responses to specific actions, a master list of places and object descriptions, and a map of the game's layout. It, too, allows you to input the above in any order you want. All of the extra work appears because of the repetitive, inefficient, and roundabout methods that it uses to get anything done.

YOUR OWN ADVENTURE PROGRAM
the first time you try!
CodeWriter Corporation
Commodore 64
Adventure Writer
A CodeWriter Program

Suppose you want to to open a locked treasure chest with a key in order to find an emerald ring. A simple program would require descriptions of the three objects as well as a list of possible actions and their results. *Adventure Writer* requires all of the above, and much, much more. First one must "destroy" the locked chest, creating a closed, unlocked safe in its place, and then destroy this and replace it with an open one. Afterwards, one would have to create yet another object — the ring. This procedure requires five entries into the computer, two on a list of "Objects Destroyed" and three on a list of "Objects Created."

But that's not all. Before anything else, the program has to be instructed to check four registers: whether there is light in the room, whether the player has the key, whether the safe has already been opened, and whether the ring has previously been removed. Assuming that all of the registers are in proper order, the computer must set some new ones to make sure that anyone caught trying to open the chest, unlock it, or take the jewelled ring for a second time is stymied in the attempt. Unless, I suppose, the player first puts the ring back, closes the chest and relocks it, in which case even more obscure registers would be set, checked, and double checked.

And that's still not all. What if there's another way to open the chest? Of if the ring disappears after a certain number of turns? And what should it do if some dolt tries putting the chest in the ring? All of this would require still more checking and updating of *Adventure Writer*'s ubiquitous registers. That's quite a lot of work just to open a treasure chest. I'd hate to think about the requirements for something complicated like combat or eating and sleeping.

So far, no one has written an ideal adventure-writing program. Such a program would genially ask users for a list of commands and responses, room and object descriptions, and maybe even have some special features like being able to handle magic spells or to randomize certain parts of an adventure. No one expects that level of sophistication in a program like *Adventure Wrter*. But *Adventure Writer* is so far from the ideal that it's laughable. With its dreary calculations and obscure error-checking, *Adventure Writer* has about as much to do with the thrill and excitement of adventure games as a three-hour lecture on inventory control.

*(Charles Ardai)*

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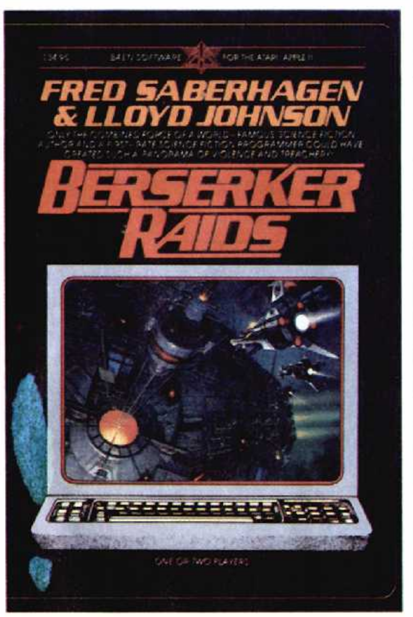
## BERSERKER RAIDS

*Designed by Lloyd Johnson and Fred Saberhagen*
*Baen Software, 1983/IBM PC, Ap C-64, At/Disk/$34.95*

I've been reading science fiction since 1956, and I've yet to meet another fan who hasn't read at least one story starring Fred Saberhagen's Berserkers — that intelligent "race" of terrifying, implacable killing machines, relics of some ancient interstellar war-to-extinction, who stalk through the galaxy, relentlessly and systematically exterminating life of any kind wherever they find it simply because that is all they were programmed to do. The reason for their apparently universal appeal is easy to figure out: They are up-to-date embodiments of Death, and thus as horribly fascinating to us as the eyes of a striking cobra must be to a mouse. As a literary device, they also give writers a highly dramatic way to portray the varieties of terror, humor, cunning, and heroism that human beings are capable of when facing the cold reality of death. The fact that, in nearly all the stories, the Berserkers end up losing, is also appealing; most of us like to read stories that reinforce our secret belief that we're going to live forever.

Packing all that mythic power into a computer game is something else again, and I wouldn't blame Baen Software if it had ignored the issue entirely. But while *Berserker Raids* doesn't quite manage to capture all the significance of the stories, it comes darned close on their entertainment value. The representation of the Berserkers makes them every bit as tough, devious, and hostile as they are in the stories. Going up against them in some of the game's more advanced preprogrammed scenarios can be about as pleasant and ego-enhancing as sticking your nose into a high-speed buzzsaw. The simulation of the space-faring humans threatened by these automated Furies is well-balanced. They always have at least a ghost of a chance of whipping the machines in open combat, and while all of the stories' really devious and uniquely human methods for cheating the Berserkers of their goal are absent, the addition of a two-player option, where each player must often fight both murdering machines and his erstwhile ally, introduces the very human issue of politics into this otherwise straight strategy contest.

The game is pretty simple to learn, and in outline is rather close to another Baen game, *Starclash II*. Each of the ten preprogrammed scenarios starts you off with a star-system map displaying ten stars, around one or more of which you will have a base capable of building warships to defend your inhabited planets from the invading Berserkers. Scenario data in the rulebook tells you approximately when the Berserkers will arrive, their numbers and strength, and how strong you are at the start of the game. During the opening grace period, you must somehow allocate the resources of your starbase(s) so that you have enough ships to put up an adequate defense. At the same time, you have to strengthen the bases themselves so that they are better able to defend the planets they circle, *and* improve the level of their technology so that the ships they build are more effective against the Berserkers.



Doing all this takes a lot of planning and scrambling, and involves plenty of uncertainties. Since you're never sure exactly when the Berserkers will arrive, you can't be certain which of your bases will be attacked first. The bigger and tougher the ship, the more time it takes to build. If a base is undefended when attacked, it will probably be lost to the attacking Berserker, and any ships it was building with it. Battles with even a bantamweight Berserker are usually more costly to you than to the attacker. While you can easily flee a deteriorating situation, you probably won't do so without at least some damage. The Berserker will usually follow you immediately, and when you arrive at your destination, you'll have to establish a new base to resupply and repair your ships. Even if you manage to polish off all the Berserkers — and their formidable starbases—you've still got to establish bases around all the unoccupied planets — a task that becomes especially hard in two-player games, where you are competing with another human for control of the starsystem.

Waging even one of these complex strategic encounters successfully is nerve-wracking, difficult, and very satisfying. Another nice touch are the complete utilities to develop your own one- and two-player scenarios. The manual gives extensive directions and advice on how to do this. About the only complaint I can make is that, like several other Baen games, the graphics are as dull as ditchwater: flat, obvious, nearly colorless character-mode numbers and letters arranged in charts, tables, or as map substitutes. Whether this is out of laziness, lack of concern or knowledge, or a legitimate concern with insuring that the game be playable in all kinds of monitor/graphics hardware environments, I don't know. But there's not much excuse for asking owners of graphics-oriented machines like the Atari to play a version that looks almost exactly like the IBM version, simply because not all IBMs have color boards. Barring that problem, however, this is a fine strategy game that I'd especially recommend to fans to two-player games. And — who knows? — it might just send you off for a look at some of those great old Saberhagen tales . . . .

*(William Michael Brown)*

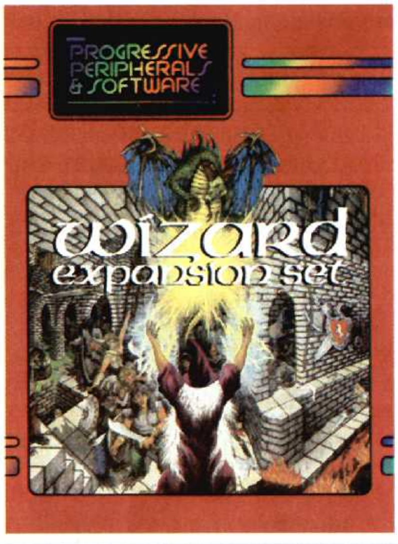
# Load & Run

**A Discriminating Look at New Software**

## WIZARD EXPANSION SET

*Progressive Peripherals & Software, 1984/C-64/Disk/$29.95*

You don't see *that* many software sequels — with the exception of some adventure or fantasy games like *Ultima* and *Zork* — so this new offering from PP&S is unusual in that respect. What makes it practically unique is that the sequel is made up entirely from screens submitted by fans of the original *Wizard* (reviewed in EG, February), using the program's construction set. If you fell in love with *Wizard* in its first incarnation, you'll definitely want the *Expansion Set.* You'll also need to be mildly masochistic; none of the designers went out of their way to make things easy for you.



*Wizard*, for those who haven't played it yet, is a climbing/jumping game with spells and strategy thrown in. You have to ambulate around a series of maze-like castles, picking up treasures and making it to a lock with key in hand in order to get to the next screen. Various falling, homicidal and disappearing obstacles add to the experience. It has 40 screens and a construction set. The *Wizard Expansion Set* adds 40 new screens, almost every one of which looks impossible at first — and sometimes 10th — glance.

No matter; you can practice up on the original disk, since you need it to load this one. I'd say that if you can get through the first 20 or so *Wizard* screens more or less intact, you ought to be able to make it through the first five or 10 *Expansion* screens. As in the original, you can choose to start on different levels — or try Mystery, which throws the screens at you randomly. This is not suggested with the *Expansion Set* unless your frustration threshold is unusually high.

The company says that a majority of the submissions they received were either Advanced or Expert level screens. So, while the play mechanic of the *Expansion Set* is the same as that of its progenitor, the actual gameplay is considerably more challenging. Let's just say the original designers were a more charitable lot. While you're at it, start sharpening your construction skills. Maybe PP&S will do this again and we'll get a shot at driving people crazy, too.

All I want to know is this: Was it a rule of this competition that the designer demonstrate that it was actually possible to get through his screen? If so, I think a couple slipped through.

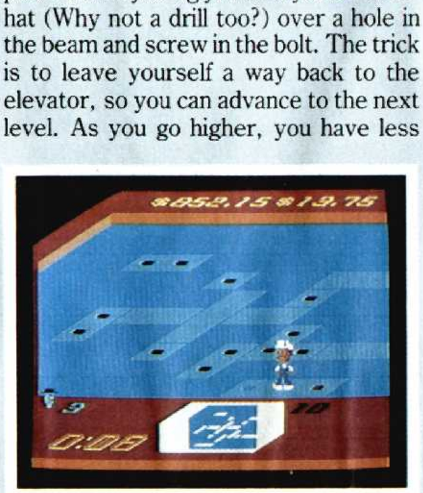
*(Louise Kohl)*

## ROCK 'N BOLT

*Designed by Action Graphics*
*Activision, 1985/C-64/$34.95*

Bolt the beams of a big city skyscraper according to a blueprint and earn bonus bucks. Activision's *Rock 'n Bolt* turns out to be a puzzle with a little arcade action thrown in to pick up the pace. And as for pace, this game moves faster than a construction worker at quitting time.

Girders slide across the screen, connecting with each other to provide a path through the floor plan. You guide the overalls-clad construction worker, complete with a jutting jaw and yellow hardhat (Why not a drill too?) over a hole in the beam and screw in the bolt. The trick is to leave yourself a way back to the elevator, so you can advance to the next level. As you go higher, you have less time to complete the puzzle, and the mazes get more complicated.



An electronic beat, reminiscent of a TV game show, is the rock part of the game. The music, if you can call it that, gets a little repetitive, though you may want to leave the volume up just to keep a good pace going.

Black bolts mean you've gotten the right placement of the girder. Red is wrong. Land on a gold bolt, and you'll get a bonus. Green gives you an additional worker. You get paid by the bolt, and a tally of your earnings is kept at the top of the screen. But your wages seem superfluous. You don't get any extra workers as a result of high earnings.

The C-64's Run/Stop key allows you to pause the game to take your unauthorized coffee break. And you'll need the rest to complete the 100-story building before noon. The clock doesn't start until you jump off the elevator, so you have time to lay out a strategy according to the beam's movement and the requirements of the blueprint. It's better to get the outlying beams in place before you bolt the ones near the elevator. Occasionally, you'll have to bolt a girder in the wrong area temporarily just to get to the more oddly placed beams.

Originally titled *Wonder Bolt* and shown at the Summer '84 CES, Activision repackaged *R 'n B* in a format not unlike Electronic Arts' *Hard Hat Mac.* The jazzed-up hype on the cover doesn't carry through to the game. If a fast-paced arcade puzzle is what you want, *R 'n B* should be a challenge. For myself, I didn't find anything intriguing enough to keep my attention.

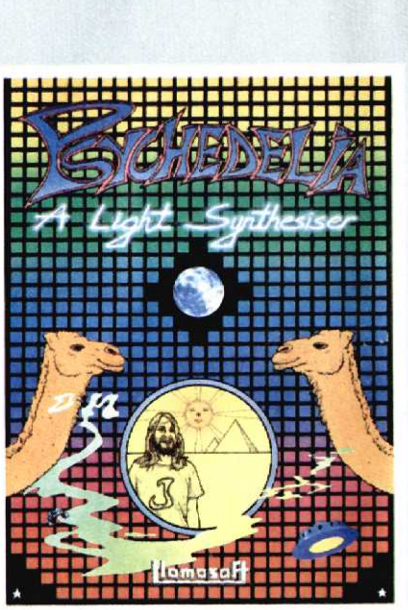
*(Ben Templin)*

## PSYCHEDELIA

*Designed by Jeff Minter*
*Llamasoft/C-64/Tape/£9.95*

Forget the last decade—the eighties never happened. Throw away your VCR, your herb brie, your copy of *Dress for Success* (if you've actually read it, never mind, it's too late for you). Wake up and smell the coffee — the yuppie craze is passe. Once it's made *Newsweek*, darling, how chic can it be?

So what's next? Keeping in mind the great fashion dialectic, the answer is obvious: 60's nostalgia. Which is where *Psychedelia*, a new yet familiar game from the British company Llamasoft,



comes in. Actually, *Psychedelia* is a game only in the broadest sense. There is no winning or losing, no killing or adventuring; the only object is to create the most satisfying and pleasurable kaleidoscopic designs on your monitor.

This is a game best played with the lights out and the music loud. The designers recommend Pink Floyd, Yes, and Led Zeppelin. You get the picture. With the keyboard you can choose from a huge selection of shapes, colors, and speeds. Then you use the joystick to generate motion, and the patterns shift and swirl at your command. It's a trip.

While *Psychedelia* is immediately playable (indeed, directions seem superfluous to the game, and they're sparse enough not to interfere with the creative process), you definitely get better as you go along. It's not so much that you *know* what to do, but you *feel* it, as the music, the incense — and anything else — turns you on.

If you get tired of the shapes on the disk, you can design your own, but I was quite happy — positively beatific — with the available options. Another clever feature that I had no use for allows you to save your favorite designs on tape. Maybe when I make the perfect "Stairway to Heaven" light-show I'll want to store it; until then, my creations will be inspirational, and transitory. It seems truer to the spirit of the thing that way.

To say that *Psychedelia* is hypnotic is an understatement. It's also addictive, and probably causes chromosome damage. I love it.

*(Dan Goldberg)*

## STUNT FLYER

*Designed by Nice Ideas, France*
*Sierra/C-64/Disk/$39.95*

Flight simulators are so common nowadays, software companies have had to begin adding gimmicks to make their flight programs stand out in the crowd. Some, like *Skyfox* and *F-15 Strike Eagle*, introduced airborne combat as a game element, while others, like *Stunt Flyer* go for something more original.

Flying airshow stunts for the benefit of a computer judge is certainly as original as they come. The very concept of performing dangerous maneuvers in a vintage airplane carries a sense of daring and romance. There's no question that plummeting earthwards at breakneck speeds only to pull up in the last minute before being smashed to splinters is exciting. And best of all, if the throttle sticks in a computer simulation, all one has to do is reboot; real life is not always so simple.

With all this going for it, *Stunt Flyer* could have been outstanding. Instead, somewhere along the line it turned into the most inane, boring, unappealing and uninteresting flight simulator of the year. In a program like *Stunt Flyer*, being boring alone is unforgivable. However, *Stunt Flyer* is so full of other problems that the boredom pales by comparison.

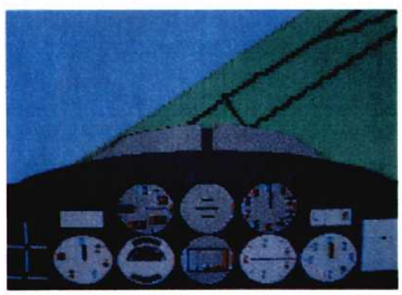
Basically, *Stunt Flyer* is a two-part program. The first part is a demonstration in which all of the various stunts are performed by "experts." The second is the training phase in which the player tries to duplicate these stunts according to instructions provided in the rule book, which is the only good thing about *Stunt Flyer*. There is also a third phase which the player can access only after achieving a level of competency in the training sequence called "Competition" — but more on that later.

The opening screen of *Stunt Flyer* is nice — if not especially interesting — and the program goes downhill from there. To start with, *Stunt Flyer* always seems to be loading something; it is no exaggeration to say that would-be pilots will spend more time waiting for the computer to find a new file than they will actually practicing their flying skills. Loading the main menu takes 90 seconds. Then loading the airshow demo takes another 125 seconds. Then another 90 to return to the main menu, and another 125 to get to the training ground. And if you want to be judged on your performance, count on another three minutes of waiting. At least. Needless to say, this process is excruciatingly dull, even if you help things along with the Epyx *Fastload* cartridge.

Worst of all, once you finally get into the plane you realize that all the waiting wasn't worth it. The plane starts in the air, so there is no takeoff, and remains in the air until time runs out, meaning that there is also no landing. While in the air, the ground is an indistinct green mass, striated occasionally with brown lines. Start performing a stunt, and the ground veers away from the screen at inexplicable angles, often leaving you stranded with no absolutely no point of reference.

The stunts themselves are simple enough with a little practice, but the game's bizarre scoring system continually gave me a score of zero, even after I had performed the stunts perfectly according to the replay. This replay, incidentally, is supposed to show a side view of the player's performance. As long as your plane remains horizontal, the replay looks fine. If you attempt to make any turns, however, the graphics degenerate. At times, the plane looks like a paper clip and at other times like a fish, but hardly ever like an airplane.

There are so many things wrong with *Stunt Flyer* that it would be impossible to list them all. One of the worst features of the program is the Competition, and it is one that prospective buyers of the game should be warned of. Simply put, the Competition is someone's sick idea of a joke. If a player enters it and successfully completes the required stunts, he or she can enter a prize-filled contest that Sierra is sponsoring. If, on the other hand, the player crashes (which is far more likely), the *Stunt Flyer* disk is rendered permanently inoperative. In other words, make one mistake and that's $39.95 down the drain. Somehow I don't find that especially funny.



*(Chales Ardai)*

## SPITFIRE ACE

*Designed by*
*Ron Verovsky and Dale Gray*
*MicroProse, 1984/Ap, C-64, IBM/*
*Disk/$29.95*

*Spitfire Ace,* another entry in MicroProse's bid for the flight simulator and air battle market, is so standard that it's an artifact. The action is unvaried, and the graphics are downright poor.

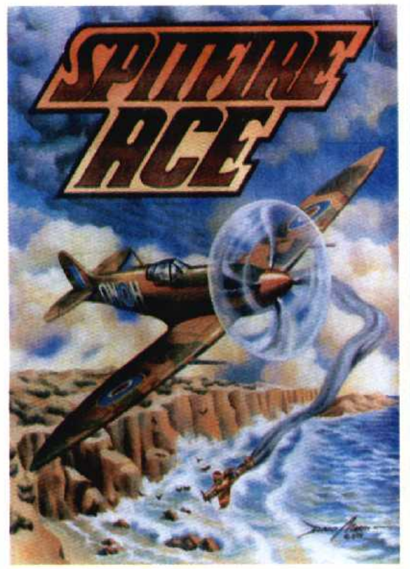
From Dunkirk to D-Day, scenarios are set up in the instruction book to feed fantasies of every would-be WW II flying ace. But the program doesn't live up to these descriptions. The difference between airplanes is negligible. The enemy *does* get faster as you progress, but this isn't a very sophisticated solution to the problem of differentiating the slow but well-armed threat of a bomber from a fighter's maneuverability. And you always start off in the air. There's no scramble to the planes to give you the feeling of being a desperate British flying ace.

Successfully downing the enemy marks a swastika on the side of your craft while the computer plays you "God Save the Queen." Five kills makes you an Ace, and you're advanced to the next skill level. You may have to bail out if the enemy fixes his guns on you; bullet holes appear on the canopy, and your power level drops. Depending on the scenario you're playing, you may be captured, rescued, or lose because you were flying too high.

*Spitfire* does allow you a few aerobatic maneuvers including the standard loop to get behind your opponent, a split "S" in which you execute a half roll followed by a half loop in order to reverse direction and lose altitude, and an Immelmann turn — the same as a split "S" except you gain altitude.

Ammo, speed, altitude, and power indicators and warning lights crowd your instrument panel. The keyboard or an extra joystick controls the power. A rear-view mirror lets you know when an enemy plane is flying up your tail.

As for being 3-dimensional, as the packaging claims, I've seen better. There is some depth in the enemy airplane, but that is about as far as it goes. You windshield is a flat layout of blocky pixels, and the wild blue yonder might as well be a piece of paper. The only variety between sequences is a change from blue to gray as you go from day to night.



MicroPrŏse has taken a slipshod approach in putting together *Spitfire Ace.* They'd have done better to concentrate on programming different terrains and more varied action.

*(Ben Templin)*

## TROLLS AND TRIBULATIONS

*Designed by Creative Software, 1985*
*C-64, Ap, At/Disk/$24.95*

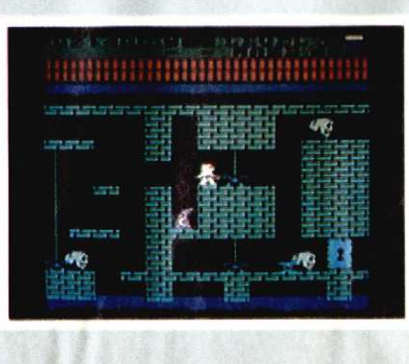
Every once in a while a game comes along that you like for no immediately obvious reason. *Trolls and Tribulations* is one of those games — for me, at any rate. Neither the gameplay nor the "script" is particularly original, and the graphics, while pleasant enough, are not what you'd call eye-popping. On the other hand, I'm still playing it with an almost missionary fervor in an up-'til-now vain attempt at getting past the buzzards.

*Trolls and Tribulations* is also one of those games where the connection between name and game is somewhat obscure. It's as if someone thought up this pretty clever pun and then just looked around for something to slap it on. Tribulations abound, but you'll look high and low for anything resembling a troll. Since you're the troll, maybe this is just as well, given the physiognomy of the species. What your character in *T and T* looks most like is a happy plumber in a hot-pink cap with an arrow tucked under his arm. He makes his way through a series of dungeons that are altogether more cheerful than any dungeon has a right to be — they look more like Ed Norton's sewer system. The atmosphere may not be consistent with the peril and skullduggery associated with adventure and treasure, but it has a certain charm of its own.

Gameplay is straightforward: At the beginning of most levels, your intrepid troll must shoot eight cretins — little green guys who march like automata. If you run into one, it unceremoniously picks you up and throws you into the water. When you shoot a cretin, he turns into an egg which must be kicked into the water before it hatches. When you've finished the clean-up operation, you move on to the main door of the level, which looks exactly like a used double-edged razor blade. Once into the level, your task is to pick up everything that isn't nailed down, especially the keys, and get to the door at the other end. At higher levels you start running into more serious obstacles, such as the chomping, ambulatory skulls, and buzzards that can turn on a dime and get you from behind. You can't shoot anything except the cretins, so the game is essentially a question of stealth and jumping. Occasionally you run into a situation where you have to leap almost to the top of the screen. To help you out there are one-man trampolines — an excellent graphic touch with a realistic "sproinnnggg" effect. I'm really quite fond of the trampolines. I spent more time than I care to admit just bouncing up and down trying to figure out how to get off.

Sound effects are adequate, if minimal, but the music is good—at least on the Commodore. (It can be toggled off if you don't agree.) There are a few unusual joystick maneuvers, but on the whole this program is not especially unique. It's just that it *is* a lot of fun — except for the buzzards.

*(Louise Kohl)*



# Load & Run

**A Discriminating Look at New Software**

## MIND CONTROL

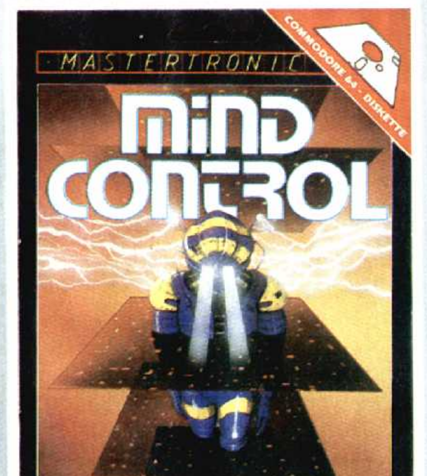
*Designed by David and Richard Darling*
*Mastertronic/C-64/Disk/$9.95*

How's this for a plot: In order to save humanity from the evil Zyco, a disembodied and diseased brain, you must enter the brain after being miniaturized and use a laser to shoot away at a giant neuron. Sound like something out of a cheap horror film? Just wait — there's more. In order to reach the brain, you must pass through the hospital which houses it, an institution populated by what the game's packaging calls "aggressive patients" — a horde of wheelchair-ridden, crutch-wielding maniacs whoose very touch is fatal. Still not enough? Here's the piece de resistance: if you touch anything in the brain, you grow to normal size, causing the brain to. . .well, you get the idea.

Ridiculous as this storyline may be, it has a certain appeal, especially to those among us who can sit through two reels of *The Curse of Nostradamus* with a straight face. Unfortunately, however, the game only halfway lives up to its storyline.

The first part of the game (the hospital phase) is reasonably good, with rather average gameplay made enjoyable by highly suitable animation, quality graphics and a good choice of background music. The objective of this round is to reach Zyco, and this is done by avoiding the hospital denizens along three hallways connected by staircases. The action on this screen is a dull combination of running and jumping, but it is worth playing if only to see the excellent miniaturization process at the end.

Sadly, though, the second screen lacks all of the nice graphic and musical decorations of the previous one; in fact the only thing that is carried over into this screen is the dull gameplay. Inside the brain, the player's character is no longer a well-drawn and animated person, but a mere dot. The screen consists of a brown maze (in the rough shape of a brain) on a plain yellow background. In the hospital, the foes were captivating, if somewhat tasteless, as they raced down the halls in their wheelchairs; here they are just round blobs that are supposed to represent white blood cells. Even the new screen's music is bad, a sort of lethargic cross between George M. Cohan and *God Save the Queen*.



Speaking of *God Save the Queen* (how's that for a transition?), *Mind Control*, like all of Mastertronic's games, was created in England. Most of the games in the Mastertronic line are good, but any other one would be a better choice than this. *Mind Control*, with its bizarre but likable plot and somewhat enjoyable opening sequence, had a shot at being an exceptional game. Unfortunately, it fell short of this mark. One of the most telling things that one can say about *Mind Control* is that it simply isn't worth the money — and at $9.95, that really says a lot.

*(Charles Ardai)*

## HEROISM IN THE MODERN AGE: PROJECT CONTACT

*Designed by Keith Gross*
*Pacific Infotech, 1983/IBM PC/ Two disks*

*Heroism In The Modern Age* is a fascinating attempt to design an exciting and complex role-playing game around modern locations, characters, situations, and themes — and, hopefully, milk them for the same kind of chance-at-heroism excitement found in role-playing games set either in the far future or in some generic version of Middle Earth. As such, it really deserves two reviews: One for the game-system itself, which I'll refer to as *HMA*; and one for the supplied game scenario written for *HMA*, which is *Project Contact*. *HMA* is a resounding success; it opens up possibilities for changing all our expectations of computerized role-playing games, whatever their setting. Whether the scenario succeeds as well will depend on the player; if you've ever fantasized about starring in an episode of, say, *Mission Impossible*, *Contact* may be right up your alley. But if, like me, you'd rather be hewing away at a brace of bloodthirsty orcs than worrying about how to catch a very important plane, you may find *Contact* a little too realistic to be fun.

Not that *Project Contact* is pedestrian; indeed, it sets up a situation that only the IMF's intrepid Mr. Phelps would consider workaday. You are summoned hurriedly to the White House, to learn that unidentified terrorists have kidnapped the President's wife and kids, and are holding them prisoner somewhere in Orlando, Florida. These geeks have also hidden a nuclear device in the city, and are threatening to set it off if their demands are not met. What they want are two scientists connected with Project Contact — a job so secret that even the CIA doesn't know anything about it. You've got exactly 60 hours to deliver the goods. They mean business, too; just for demonstration purposes, they've already offed Mt. Rushmore. Your mission: Find the two scientists, discover as much as you can about Project Contact and the terrorists, and, most important, protect Orlando and the Prez's family from destruction. You can take up to five characters on the mission, along with a fair amount of cash, and all the spook equipment you can carry. However, secrecy is a paramount concern — and if any member of your force is caught or killed, you can just guess how much the Secretary will be willing to admit about his knowledge of your actions.

So far, so middling-fair. This is all a little too TV-derived for my taste, albeit complex enough to be challenging. But the complexity of this scenario is nothing beside the complexity of the game system.

The character-simulation section, for instance, is incredibly detailed: compared with any other role-playing game, *HMA* has real characters. Along with a definite name, age, and sex, they come with a family background and socioeconomic status, have jobs or professions and skills to go with them, and ratings in 14 different aptitude areas — ranging from the usual things like strength and coordination to empathy, dedication, verbal and social ability, mechanical aptitude, and resistance to disease. The range of individual variation available is mind-boggling: any character can possess any combination of some 90 skills, be qualified for any of 113 jobs, and, depending on his aptitudes, skills and what he is equipped with, perform more or less adequately any of 77 highly specialized tasks during game play.

And that's just the supplied characters. If you want to come up with your own, a special character-generation module lets you control your character's self-development. He can gamble, watch TV, meditate, go to law school, study knife-fighting, get married, join the army, take up swimming, or write computer game reviews. You can change any or all of their 14 basic aptitudes, give them skills you think they'll need during the scenario, and provide them with items they'll need to perform the special game tasks.

Your huge choice of characters would be meaningless if the game system didn't also allow for a wide range of possible actions for them to perform during play — but *HMA* succeeds admirably in this area, too. Once you've assembled your party of agents, the scenario presents you with a series of situations, each described in a few lines of text. You're also presented with a list of action alternatives, which may number as many as a dozen, and cover everything described in the situation: people, places, and things. Success or failure in any one action can have a wide range of good or bad effects on the character(s) you picked to perform it; along with the usual deaths and injuries, they may panic, lose their self-confidence, increase their abilities in a particular area, etc. Highly persuasive characters can even increase the size of the group beyond the five-member limit; a few non-player characters you meet in your travels are as elaborate as your own surrogates, and, if approached correctly, can be induced to join up with you.

Graphics aren't this game's strongpoint; beyond stick-figure displays of each character's possessions and a rather standard mixed text-and-graphics lineup for battle situations, the game is basically all text. I can't really fault it for that, though; given the basic richness and depth, providing equally rich and realistic graphics would almost demand that the player have the storage equivalent of a videodisc player attached to his machine. As a matter of fact, *HMA* seems to use the capacities of two disk drives to the limit; disk accesses are very frequent during play, and even so, it sometimes takes an awfully long time to get from one decision point to another. At least the documentation includes an extensive reference manual, and all ten IBM function keys have been programmed to allow instant access to character stats, replays of situation descriptions, and game-save features.

Combining all the imaginative possibilities of text adventures with the personal involvement of role-playing games, *HMA* is not only quite a game-design achievement, but has an awful lot to offer any serious fan of either game genre. I can't say as much for *Project Contact* — but that's just a matter of taste. Even if you agree with me about *Contact*, you'll probably want to pick this baby up anyway. Equipped with its master disk, you can play a series of three more *HMA*-based scenarios: *Project Decathlon* (someone's sabotaging the Olympic Games...), *Emergency Ward* (a soap opera along the lines of TV's *General Hospital*), and *Peace On Earth* (U.N. diplomats try to stave off nuclear Armageddon). There's also a GameMaster disk that will allow you to write your own scenarios, with the same detail as *Contact*. And if you're *still* not satisfied, there's *Heroism Of An Ancient Age*, a sister-system that promises the same depth as *HMA*, in a fantasy setting, with battles involving up to 64 combatants. My legendary sword against an orc army. . .now, that sounds challenging!

*(William Michael Brown)*

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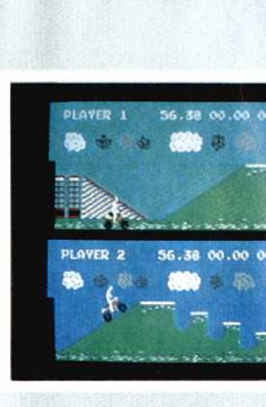
## KIK START

*Designed by Shaun*
*Mastertronic/C-64/Disk/$9.95*

The motorcycle is the forgotten vehicle of computer gaming. There are spaceships, submarines, tanks, and racing cars — lots of racing cars — but until now, not a single motorcycle has ever graced the computer screen. There may be a good reason for this: the motorcycle is an unwieldy contraption, difficult to use, and even more difficult to program realistically into a game. And how do you make a motorcycle game that doesn't look like a two-wheeled version of *Pole Position*?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*Kik Start* has solved this last problem by making the game not just a race, but an obstacle course that is perfectly suited to motorcycle stunts. No, there aren't any wheelies in this game, but there are barrels and bales of hay to ride on, pits and water traps to jump over, fences and brick walls to ride carefully across, and many other tricks and traps. And at selected intervals, you must build up enough speed to vault over the requisite rows of cars, trucks, and brick-red double-decker buses.

Double-decker buses? Yes, that's right — *Kik Start* is an import of surprisingly high quality from Great Britain. *Kik Start* could easily give many American programs a run for their money, especially at its incredible $9.95 price.

This game's only problem is that its instructions (if you can call one paragraph on the back of the package instructions) are far too limited. Since each maneuver requires a different strategy, learning the rules takes trial and error.

Once you understand the controls, however, gameplay is flawless. Though the objective is to complete the courses in the shortest possible time, it's fun just to try to stay on the bike. And since you can choose your course from more than 500 possible combinations, the game can be slightly different each time.

The graphics and animation are above average, especially in the movements of the tiny biker seated on the cycle. The attract mode's hi-res picture of a motocross racer and its rendition of the "Can-Can" are both excellent, though the connection of music and game is a little obscure.

All in all, *Kik Start* is a well-constructed, enjoyable game. It may not have the speed and excitement of auto racing games, but it is every bit as much fun.

*(Charles Ardai)*

# Load & Run

**A Discriminating Look at New Software**

## THE QUEST FOR THE HOLY GRAIL

*Designed by C.N. and R.R.*
*Mastertronic, 1984/C-64/*
*Disk/$9.95*

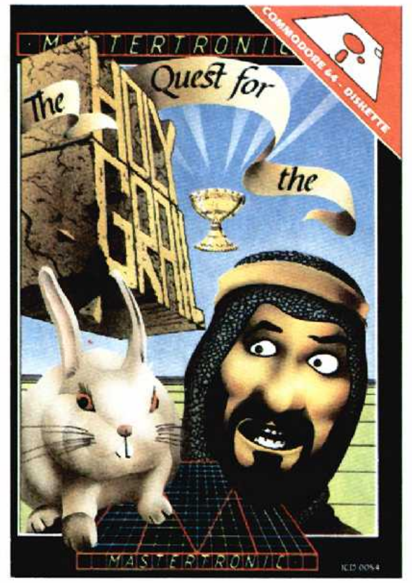
Yes, it's that *Quest for the Holy Grail* — more or less — complete with rabid rabbit, Holy Hand Grenade and knights with a taste for landscaping. (Not to mention Eugene, the homicidal peasant, who comes after you with a VIC 20.) The packaging even discreetly mentions Monty Python on the back. And while this game probably won't appeal to hardcore adventurers who solved *Sorcerer* in one sitting, it has an attraction of its own.

*Quest for the Holy Grail* starts you off in a blacksmith's forge, with a lamp, a key and a left-wing CMD nut. Follow the cardinal rule of all adventures and pick up whatever you can. (You can carry only five objects; whatever you do, don't drop the lamp.) If you forget anything, not to worry: one wrong turn in the village and you run up against Eugene. This is a guaranteed — although not recommended — way of getting back to the game's beginning. After that, you'll have to find a pink shrubbery, a baseball glove, a cesspool and . . . but I don't want to give away the plot.

This British import is not altogether without blemish, however. It is a graphic-text adventure within the meaning of the act — just. While the graphics have an artless charm, they are on the primitive side. From time to time you may find yourself in what is described as a forest, but looks more like one wilting palm and a few lollypop-shaped growths. Let's just say the graphics aren't going to give the folks at Penguin any sleepless nights.

Or anybody at Infocom or Synapse either. The parser isn't illiterate, exactly, but its vocabulary is on the limited side. You have to call a spade a spade — shovel is definitely not on. Another irritating problem with the text: When a new description appears, you only get half of it initially, and then have to toggle the rest up before you can type in a command. In the heat of the chase, this can be a drag.

However, *Quest for the Holy Grail* is a pretty good introductory-level adventure. If you've seen the Python movie, you won't be in much doubt over the general strategy, but you'll still have to fill in some of the detail. Mastertronic points out that it is an especially good program, given the low price. I'm inclined to agree, but the more games I see from this company, the more I wish they'd stop going for "good for the price" and start taking the time to be just plain good. They just might be very good indeed.



*(Louise Kohl)*

## MIND CASTLE I

*Designed by Connie C. Slater*
*and Frank G. Andrews*
*MCE, 1985/Apple II series/*
*Disk/$44.95*

There's something strange about *Mind Castle I*: its name. First games, like first novels and first marriages, seldom explicitly recognize their premier position. Are we to infer that there is a *Mind Castle II* already in the works? If so, I have a few suggestions for its designers.

First of all, they need to rescue the game from its existential confusion. *Mind Castle I* plays like an unholy cross between *Clue* and the Stanford-Binet intelligence test, with poetry by Herschel Walker.

Given a blueprint of a six-story Victorian castle (obviously the product of some modernist architect's nightmare), you are challenged to ascend to the tower by solving puzzles in the rooms along the way. You have to actually move through the castle, room by room, and ask for the riddle. In each room you'll be given an adventure-game description of your surroundings. Ignore them — they're entirely gratuitous. There is nothing to do here but answer the puzzles, which (as Dorothy Parker said of Katherine Hepburn's emotions) run the gamut from A to B. They're mostly logical quizzes, with some pattern-recognition tests thrown in.

There is a hint available for each puzzle, and you aren't penalized for seeing it. So if you're really keen on completing the exercise, you might as well ask for them all. And, as there's no penalty for wrong answers either (even though some of the questions are multiple-choice), ultimately success will be yours, if you can stomach it. Which is no small task, considering the insipid rhymes that the program responds with. "Hurrah! Hurrah! I knew you'd do it. That was correct. You got right through it!" No comment.

Eventually you get right through enough puzzles to go upstairs. Soon you're in the tower, where you are asked the trickiest question yet, and if you miss it, it's back to the fourth floor. Then you've got to answer the same questions all over again to get back up. Take my advice: Once you're in the tower, don't blow it. Since the puzzles are always the same, you won't want to play the game twice.

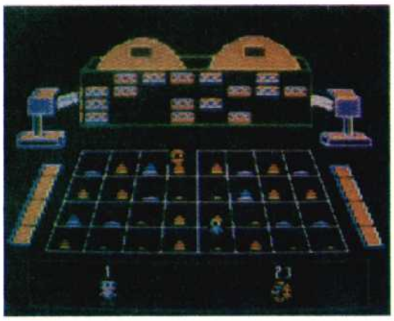
*Mind Castle I* is called "a logic adventure game." The bad grammar aside (when did "logic" become an adjective?), I take exception to this description. This is no adventure game; nothing happens. And as an educational game, it's unclear what the game is supposed to teach. There are better logic-teaching programs than this collection of corny puzzles. And the poetry could stunt your growth.

*(Dan Goldberg)*

## STATION FIVE

*Designed by Stephen Goss*
*MicroFun, 1984/Apple/Disk/$20.00*

*Station 5* is a series of four arcade-style games that are cute, challenging, and (like many abstract arcade games) tied together by a storyline that often has little to do with the game itself. *Station 5* takes place on the moon, and you use your joystick (or keyboard) to control a robot whose mission is to keep generating power to Earth from the last lunar nuclear reactor. There are four



challenges which take place at different lunar sites. If you forget about the storyline and just get into the arcade games, you can have a good time.

Screens one to three are just four-by-eight square grids that play like variations of *Q-Bert.* The first screen takes place at "The Generator Site" on the moon. You move the robot (called "Hoofer") on different squares to open and close "vents." The more vents you keep closed, the faster you accumulate the points necessary to advance to the second screen. However, if any twelve vents are closed at the same time, the reactor blows up, and the game ends.

Of course, Hoofer isn't the only thing that opens and closes vents. Randomly falling meteors also close them — and smash Hoofer if they land on him. So you must run, dodge, and jump around the screen, trying to keep eight to ten vents closed at all times.

The second screen moves to the "Transmission Site," where Hoofer jumps around trying to build transmission towers. A hammer randomly appears, and each time Hoofer reaches it another section of a tower is built in the background. In addition to the hammer, deadly ion formations appear on the grid. After a few seconds, they're zapped by one of eight ion neutralizer cannons that line the left and right sides of the grid. Naturally, the cannons can also destroy Hoofer if they zap him, so your trusty robot must dodge ion formations and cannon fire as he chases the hammer around the grid. Screen two also offers the opportunity to earn extra robots if you accumulate enough points.

The "Transporter Room" sequence is most like *Q-Bert.* Your goal on this grid is to open all 32 squares on the grid, which isn't nearly as simple as it sounds. Landing on a square will open or close it, depending on its condition before you jumped on it. So things get tricky as you try to find a method to get all the squares open. And, as always, there are some complications. This time, lethal togglers cause trouble by changing the switches on the screen and also by destroying Hoofer on contact. There's also the danger of the plasma balls, which are released after a certain amount of time. On this screen you've really got to be on your toes. If you succeed in the room, you'll be automatically transported, with a nice graphic touch, to the final screen.

The "Orbiting Station" resembles *Frogger* in Space. With a fueled up Hoofer, you fly up, down, and slowly drift around, landing on space platforms to pick up spare parts and keep to the story line. The dangers this time include meteors, fly-by satellites, and Hoofer's deteriorating fuel (which can be replenished at the bottom of the screen). If you survive at this screen, you'll be sent back to the beginning at a more difficult level.

The screens are nicely drawn and colored and present interesting challenges. The game also has three different skill levels, from beginner to advanced. This may not be an all-time classic, but at its low list price, this is a good chance to pick up four different arcade-type games.

*(Bob Borgen)*

## THE ANCIENT ART OF WAR

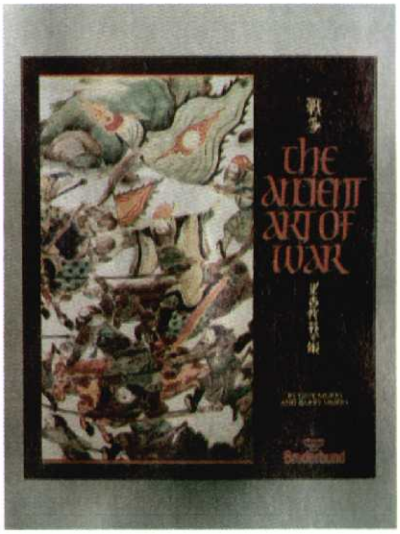
*Designed by Dave Murray and Barry Murray*
*Broderbund, 1984/IBM PC, PCjr, PC XT/Disk/$44.95*

The fifth-century Chinese general, Sun Tzu, author of *The Art of War,* wrote that "to subdue the enmey without fighting is the acme of skill." This is the object and basis of Broderbund's new strategic war game, *The Ancient Art of War* — an excellent animated simulation that captures the spirit of Sun Tzu's classic as well as the enemy's flag.

The paradoxical solution of waging war peacefully is found in outmaneuvering your opponent through stealth, superior force, or speed. While brute force can sometimes result in the enemy's surrender or retreat, it is the commander who carefully thinks out his strategy and delicately deploys his troops that will successfully carry the field that day.

There are three types of soldiers — though, alas, none of them are Chinese — who fight in squads of fourteen: Archers (Persian), Knights (Spartan), and Barbarians (Neanderthal). In a very strange way, the game structure resembles the children's classic: "Paper, Stone, and Scissors." Archers fight best against knights, while knights score heavily against Barbarians. The thick-skinned barbarians devastate archers. Perhaps war is really that simplistic. In fact, one of the underlying principals that the authors are trying to convey, is that the way to succeed in war is to do it peacefully.

There is a large-scale tactical map which lets you scroll through the entire battlefield. Villages can offer food, while forts provide strategic control of terrain and, occasionally, freshly-trained troops. Whenever a squad enters combat, a zoom picture can be called up which will depict the individual fighting. During the fighting, you can order different classes of the troops to advance or retreat, as the situation dictates.



Unlike most strategic war games, *The Ancient Art of War* is very easy to use. There is a crosshair which can be moved around the screen rapidly with the arrow keys. When you center the crosshair on a unit, various options appear on the screen which let you select what you want that unit to do on that turn. Squads can be programmed to function for dozens of turns ahead.

To spice up the computer opponent, the game provides for eight quite different military personas. You may choose among Athena (total offense), Alexander The Great (protects his flag well), Geronimo (hit and run), Crazy Ivan (unpredictable and easy), Julius Caesar (concentrated force), Genghis Khan (surprise attacks), Napoleon Bonaparte (strikes at your weak points), and the indomitable Sun Tzu (brilliant overall strategist).

When your mastery of the varied aspects of war enables you to win all of the campaigns, you might consider designing your own. Included with the game are all the tools necessary to create a battle situation. Terrain is designed with innovative modular graphic blocks. Up to twenty squads can compete at a time, so things can get quite lively.

One severe drawback of the gameplay comes when you have several squads engaging in combat simultaneously. The game runs on a time clock, regardless of your actions, and you can only control one squad at a time; the other combats go on without you at the helm. The computer is rather fond of squandering your forces by fighting them to the last man every time the combat is resolved automatically.

While this form of war gaming will not appeal to all the purists, *The Ancient Art of War* is definitely the finest squad-level strategy game yet devised. The animated graphics during zoom mode certainly enhance the realism of the action. Perhaps in the next game, they can add cavalry. After all, Genghis Khan never fought on foot.

*(Roe R. Adams III)*

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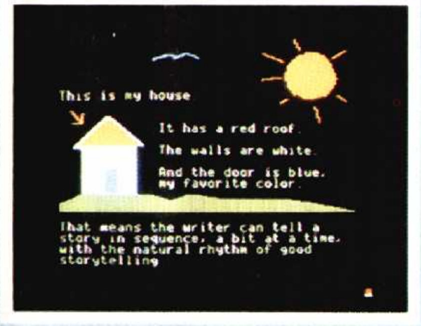
## BANK STREET STORY BOOK

*Designed by George Brackett*
*Mindscape, 1984/Ap, C-64, IBM PC/Disk/$39.95*

*Bank Street Story Book* is the best and most advanced program I've seen in nine years as an evaluator of educational toys. During the past three years, I've worked with educational software and watched the development from static page-turning programs to programs that are truly interactive. *Story Book* is an excellent example of the latter sort — kids don't just keep the program moving, they tell it what to do. It's both a "how to" and a "let's do" learning situation that really involves the user.

*Story Book* lets children ("ages 8 and hereafter") complete stories by incorporating color pictures and text, and even some animation. The stories can be several "pages" long, and can be saved to disk and printed out. Children can also create cards, maps and just about anything else they might want to, using 21 colors and a simple, easy-to-use word processor.



This is my house

It has a red roof.

The walls are white.

And the door is blue.
my favorite color.

That means the writer can tell a story in sequence, a bit at a time, with the natural rhythm of good storytelling

*Story Book* gives the user a lot of freedom, which is a real plus, since kids tend to resist authority — even if it's just a computer telling them what to do. This program makes the computer a partner rather than just a tool for information drills. Kids can do as much or as little as they want, either simply reading stories that are included on the disk, using the very comprehensive tutorial, or jumping right into creating their own literary works. Since *Story Book* is an open-ended program, it can used by kids at many different levels of sophistication.

The program has an easily accessible menu that lets kids switch functions fairly quickly; they can go easily from drawing lines to text or colors. The graphics are good, too. You can use a joystick (a self-centering one is best), but a Koalapad or its equivalent gives the best results and is easiest to use.

The best thing about *Story Book* is that it is diverse enough to hold a child's interest for a long time. And it is so much fun to use that the learning process is painless; there's no better way for kids to learn than through play.

Educators often discuss the difference between divergent thinking (where there are many different answers to a problem) and convergent thinking (where there is just one answer). This is definitely a divergent program — it encourages creative thinking and flexible problem-solving. For this alone I would give *Story Book* the highest possible rating.

*(Dr. Marilyn Sloan)*

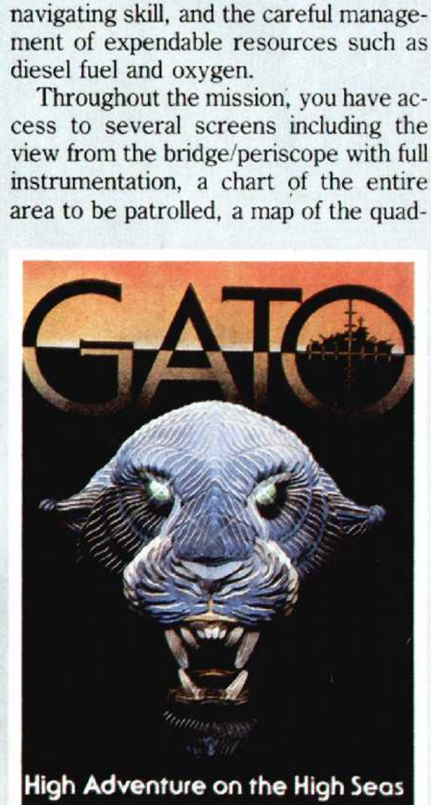
## GATO

*Designed by Ed Dawson & Paul Arlton*
*Spectrum Holobyte, 1984/IBM PC, PCjr/Disk/$39.95*

Take the realism of a top-notch flight simulator, add a touch of the pulse-quickening action of an arcade shoot-'em-up, and you've got *GATO*, a World War II submarine simulation. Unlike some of the popular flight simulators, *GATO* doesn't require you to wade through a thick operations manual before getting your feet wet. All you need to know to begin patrolling the South Pacific is contained in a 20-page manual. *Do* read the manual before heading out to sea, however, so you don't mistakenly torpedo your own subtender as I did on my first mission. (The subtender is your only means of refueling and replenishing your torpedo supply while at sea).

After receiving your mission from COMSUBPAC, you begin your patrol with full control of all of the submarine's navigation and weapons systems. Whether you are instructed to intercept an enemy convoy of troop carriers, or rescue a downed pilot, the success of the mission will ultimately depend on your navigating skill, and the careful management of expendable resources such as diesel fuel and oxygen.

Throughout the mission, you have access to several screens including the view from the bridge/periscope with full instrumentation, a chart of the entire area to be patrolled, a map of the quad-


GATO
High Adventure on the High Seas

rant you're in, a radar screen, a damage report, and the Captain's Log. The log contains the name of every ship you've sunk along with the date it was torpedoed. All screens and functions can be called up with simple one-key commands. There's even a function template included which can be attached directly to the keyboard so you never have to search through the manual for a command.

Adding to the game's incredible sense of realism is the accurate simultaneous tracking of several objects in three dimensions. You can, for example, maneuver your sub directly below a passing ship if you've reached an adequate depth. Fail to clear the bottom of the ship, however, and you can kiss your periscope and radar tower goodbye.

While most people should be able to successfully complete a mission in their first session, the simulation offers enough strategic challenge to keep even veteran sub captains coming back for more. As your skills improve, for example, so does the ability of the enemy to decipher your message code. You may even receive phony missions broadcast by the enemy to lure you into dangerous territory.

Additional features such as multiple skill levels, an instant spreadsheet (for when the boss walks by), sound which may be toggled on or off, and the choice of day or night missions, help to make *GATO* the perfect simulation for everyone who would rather dive right in, than struggle to get off the ground.

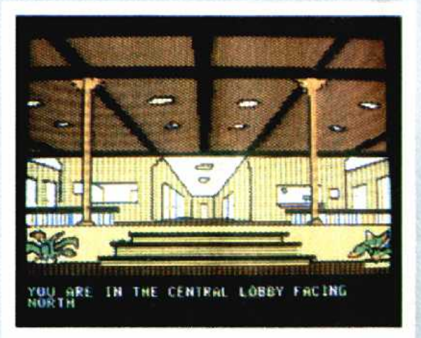
*(Bob Guerra)*

## THE ALPINE ENCOUNTER

*Designed by ibidinc*
*Random House, 1984/Apple, Commodore, IBM PC/Disk/$39.95*

There's something amiss at the luxurious Alpenhof ski resort in the Austrian Alps. And this time it's not just the room-service bill. One of the guests has stolen some valuable blueprints, and you, a top-notch secret agent, have been hired to investigate. Don't expect help from the tourists.

That's the scenario of *The Alpine Encounter*, an excellent graphics and text adventure, originally released by ibidinc last year. Unfortunately, that small software firm lacked adequate distribution means, and the game was never widely available. Now Random House Software has acquired the rights, and the game has a second chance.



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YOU ARE IN THE CENTRAL LOBBY FACING
NORTH
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Given only 12 hours to recover the blueprints, you have to plan every move carefully. Each command you make expends one minute of your allotted time. To solve the adventure, you've got to explore and map the resort. That's standard. But what sets *The Alpine Encounter* apart is its collection of some 30 characters, who wander in and out of the story, appearing at different times in varying locations. You've go to track them, question them, and generally spy on them to figure things out.

The characters' ghostly movement through the resort gives the game an eerie feeling. More than other graphic adventures, this one feels like a movie — or a recurring dream. The story unfolds whether you participate in it or not. But if you hope to emerge victorious, you'd better not just watch, but make like a secret agent.

The game's graphics are good, and the resort is full of rooms and small details to explore. You even get to play an arcade-style sequence, in which you ski down to the "Hafway Haus" to investigate. The program accepts complete-sentence commands, and can be saved — don't expect to solve it in one sitting. This is a good adventure, with excellent characterizations and plenty of intrigue, which deserves another chance.

*(Bob Borgen)*

## SWISS FAMILY ROBINSON

*Designed by Gabrielle Savage,*
*Tom Synder Productions/Spinnaker, 1984/C-64, Ap/Disk/$26.95*

*Swiss Family Robinsion*, a hi-res graphic adventure, closely follows the actual storyline of the original book. Designer Gabrielle Savage says, "I wrote this game with the express purpose of intriguing children into reading Johann Wyss' great classic." The richness of the graphics and the natural adventure elements of being shipwrecked on an island weave together to create an absorbing game.

From the very beginning, the player is aware that he is involved with much more than just a static adventure. In the role of Fritz, the eldest son, you work on how to build a raft to leave the shipwreck. Sometimes the family offers advice about the usefulness of a particular item you have found, or little Franz whines that he is thirsty. You had better pay attention to Franz, or he pulls the plug on the game.

Each item you find appears on the screen as an icon, both in the picture locale and in your inventory. Books graphically open, and maps unfold. Like *Seven Cities of Gold*, the map you find at the beginning of the game is blank. Only as you explore the island do sections of the map gradually fill in. The survival book you find in the ship is a fountain of information on flora, fauna, and necessary skills. It opens on the screen to each section you wish to read. The whole program is full of these nice little graphic touches. Try throwing a coconut at a monkey.

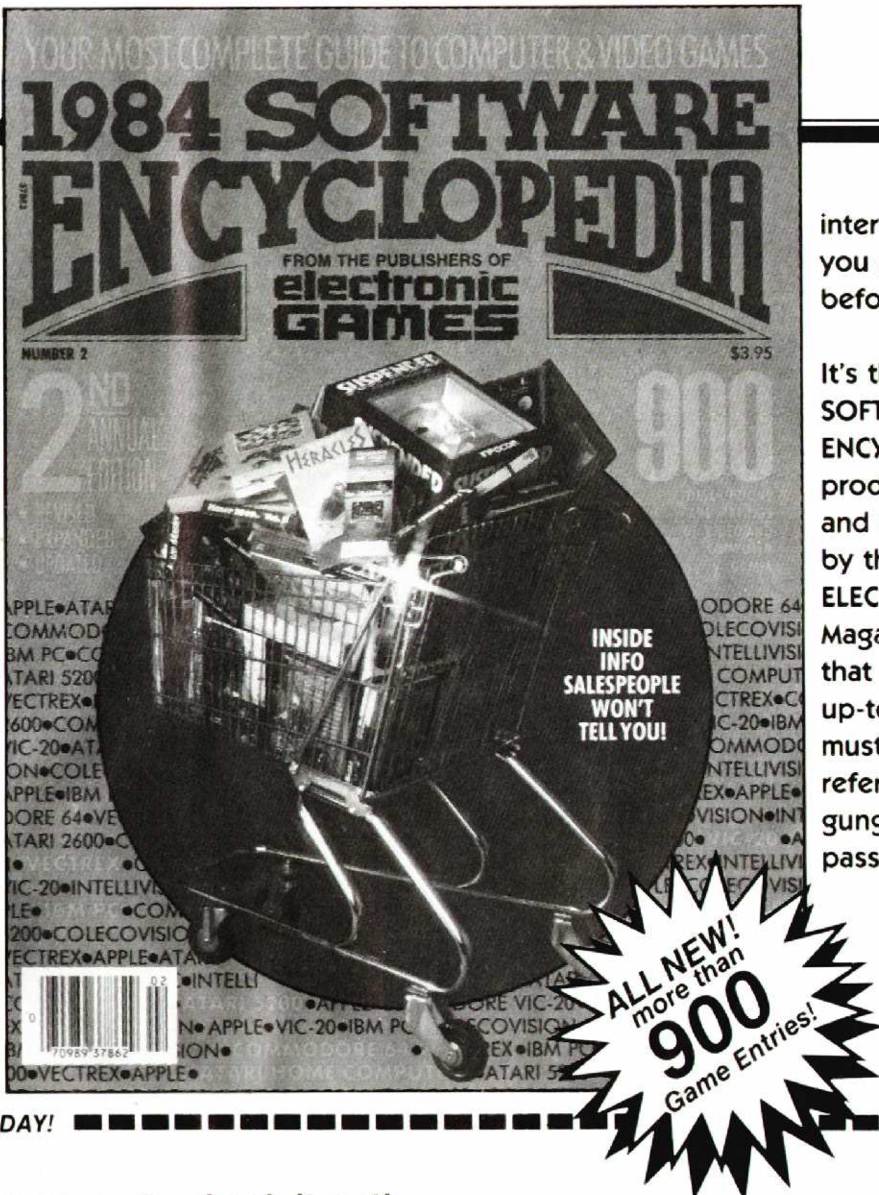
As an aid to children in handling an adventure parser, several layers of help screens have been included. Besides the common general verb table, the program has an additional help screen after you have selected a particular verb. For example, when "GO" is selected, the screen will note that while on the ship, you may "GO BELOW," or "GO TOPSIDE." This allows for a rich vocabulary without frustrating the player with the dreaded "find the right synonym" syndrome.

The island is quite large with 223 separate locations. Accurate mapping is essential, not so much to avoid getting lost (the evolving game map handles that for you), as to recall the location of special items or situations. A wide variety of lush tropical plants and exotic animals abound to delight the player.

While Spinnaker suggests that *Swiss Family Robinson* is for ten-year-olds and up, the game is so well designed that many seven- and eight-year-old children will be able to handle the game with minimal assistance from their parents. The entire program is aimed at being a learning experience without seeming "educational."

*(Roe R. Adams III)*

# THE SUPER GAMES SUPERMARKET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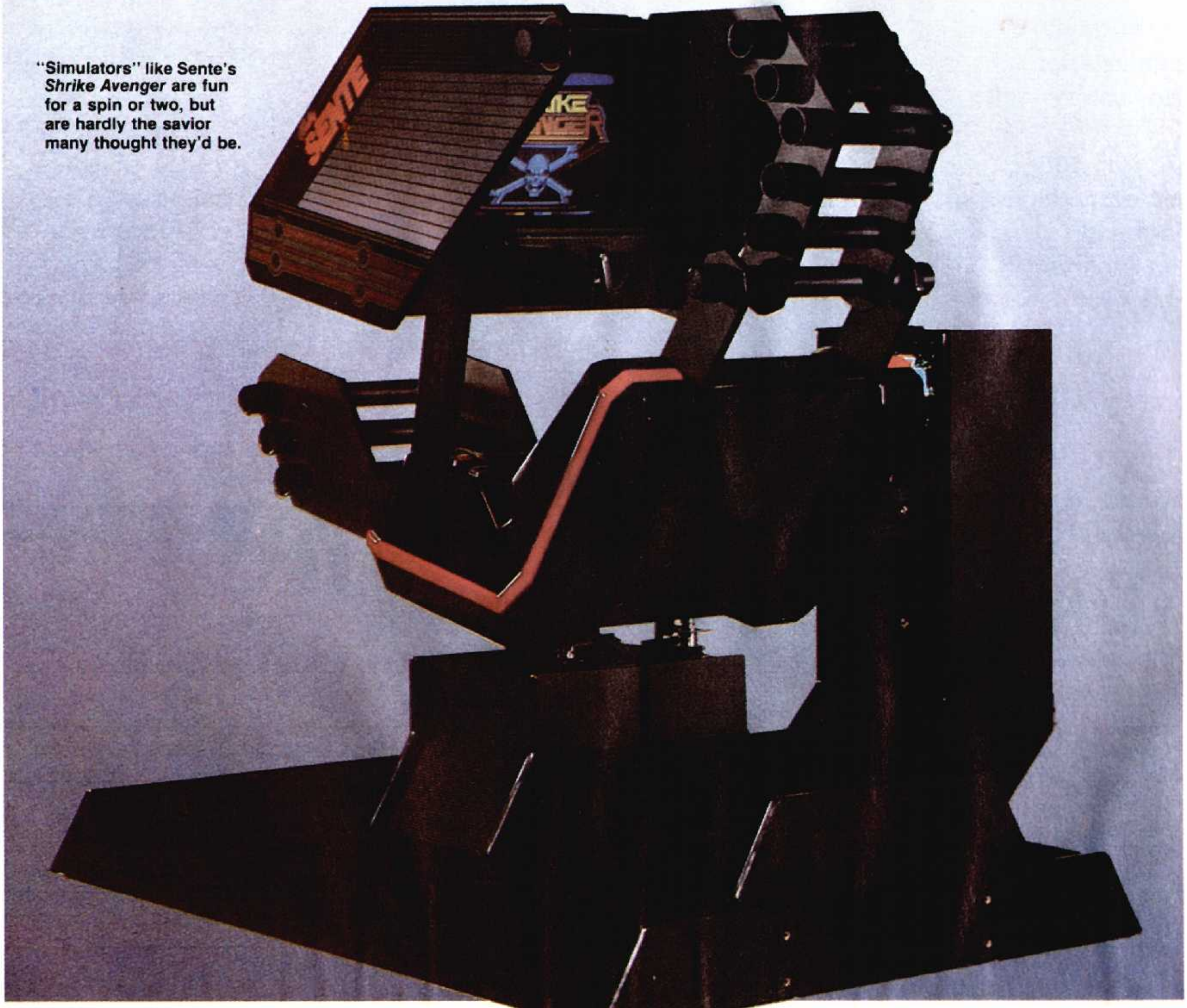
# What's new in the arcades? Kung-fu sequels, computer-game conversions and "simulators" that will make your stomach drop.

By ROGER C. SHARPE

The balance of power in the world of arcade games has shifted. American manufacturers are producing fewer and fewer videos in favor of pinball and novelty machines, while their Japanese counterparts are increasingly finding themselves responsible for the occasional video innovation that sneaks into the arcades.

This state of affairs was clearly evident in Chicago recently at the Amusement Showcase International. A rash of Japanese kung-fu video games dominated the show, which saw American companies like Williams, Bally and Game Plan retreating to pinball. There were Japanese sports games for just about every taste — from football to roller derby to this season's heavy-hitter, karate. Data East showed up with a two-player sequel to *Karate Champ* as well as *Kung-Fu Master* (by way of a license from Irem), Kitco introduced *Chinese Hero*, and Konami answered with *Yie Ar Kung-Fu*. All offer new challenges for the video karate fan, and will be reviewed at length in the July CE.

Tehkan made its presence felt with a



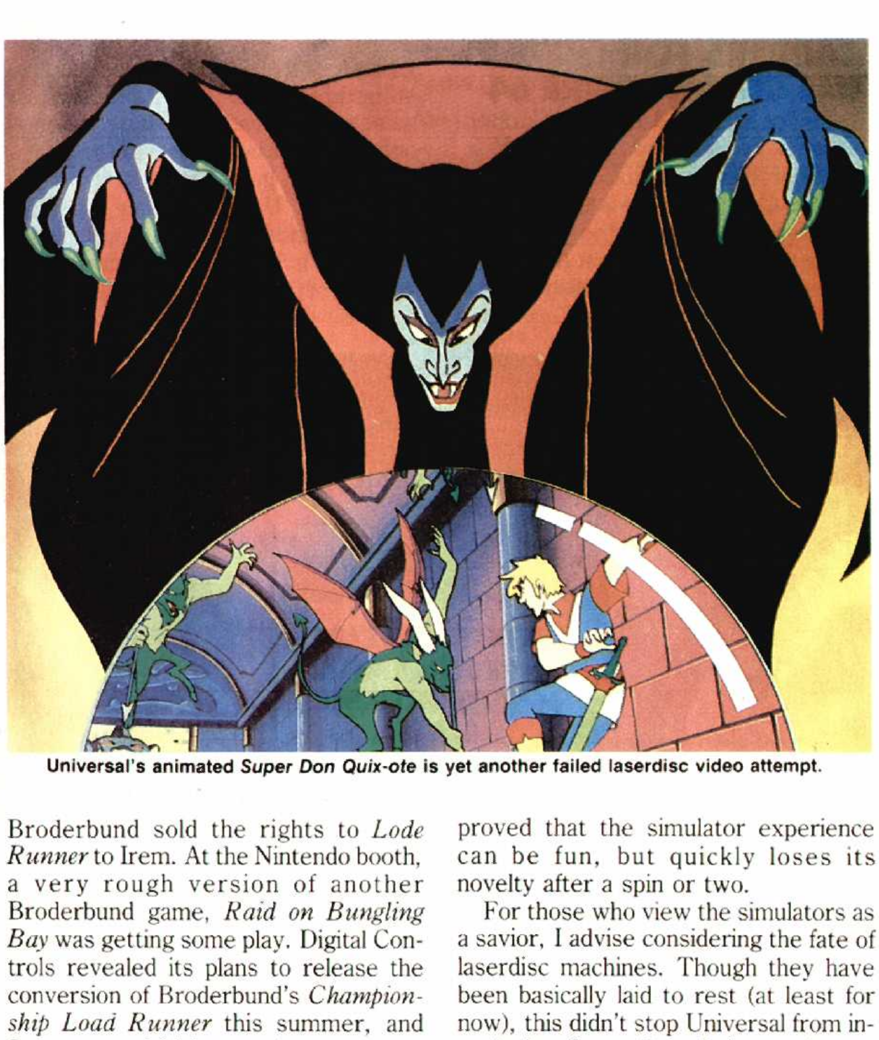
**"Simulators" like Sente's *Shrike Avenger* are fun for a spin or two, but are hardly the savior many thought they'd be.**

remarkable improvement on the Atari classic, *Football. All-American Football* is an exciting one- or two-player, full-color game that features everything from glowing trackballs to a choice of eight offensive or defensive formations and plays. And, if the Kansas City Bay Bombers did nothing more than supply Raquel Welch with a movie vehicle a number of years back, at least Nichibutsu thought enough of roller derby to bring out *Roller Jammer*. First, you have to qualify by skating around a track in record time, weaving between flags and poles, before gaining the chance to go up against the "Big Bombers." (There are nine different teams to compete against.) In order to pass the required thirty players in each round, you're allowed to throw punches, kick, and climb over your opponents in true roller derby fashion.

Marching to the beat of a slightly different derby was Bally/Midway, which unveiled *Demolition Derby* — a game in which as many as four players can take to the wheel and bash each other until a winner emerges. Otherwise, the Chicago-area manufacturer of *Pac-Man* and *Space Invaders*, which has been in a slump of late, arrived with an army of new pinball games, including an updated version of *Fireball*.

Atari, the other major American company at the show, arrived with another gem of a game that utilizes the same 68000 (chip)-based system as does *Marble Madness*. Like its predecessor, *Paperboy* delivers superior graphics and an attention to detail seldom found in arcade games these days. *Paperboy* plays like it sounds: It's about the trials and tribulations of delivering papers on your typical suburban street. There are three difficulty levels and handlebar controls for maneuvering your bike past angry dogs, wayward station wagons, and the kinds of front porches that would cause nightmares for any real paperboy. It was definitely the best new video game at the show.

Besides karate games and *Paperboy*, the big news in Chicago was the growing trend towards dressing up popular computer games in arcade clothing. For a number of years, the arcades led the way for almost all software development, but that began to change last year when First Star licensed *Boulder Dash* to Exidy and Broderbund sold the rights to *Lode Runner* to Irem. At the Nintendo booth, a very rough version of another Broderbund game, *Raid on Bungling Bay* was getting some play. Digital Controls revealed its plans to release the conversion of Broderbund's *Championship Load Runner* this summer, and Sega was exhibiting an almost screen-for-screen translation of Activision's *Pitfall II*.



**Universal's animated *Super Don Quix-ote* is yet another failed laserdisc video attempt.**

Fortunately, not every company was content to take two steps forward and one step back. Konami, one of the industry's Japanese leaders, showed off a Bubble Memory System that could revolutionize the look and speed of arcade games.

The 512K system can generate more than 2,000 colors, includes a sound synthesizer that's three times more powerful than the arcade standard, and is capable of creating incredible 3-D images, such as those seen in *Nemesis*, the only "bubble" game Konami demonstrated.

Konami's system certainly looked more promising than the so-called simulators (I call them high-tech kiddie rides) that were on display. Sente's *Shrike Avenger*, Exidy's *Vertigo* and Colorado Game Exchange's *Hot Seat* all proved that the simulator experience can be fun, but quickly loses its novelty after a spin or two.

For those who view the simulators as a savior, I advise considering the fate of laserdisc machines. Though they have been basically laid to rest (at least for now), this didn't stop Universal from introducing *Super Don Quix-ote*. An animated, timed-response exercise, this game pales in comparison to Cinematronics *Space Ace* and RDI's *Thayer's Quest*. Another surprise in the laserdisc category was Sega's *GP World*. Featuring two monitors and housed in an impressive sit-down cabinet, this car-racing game takes the *Pole Position* approach to life in the fast lane. (It also looks remarkably similar to *Laser Grand Prix*, Taito's ill-fated effort which previewed at a show two years ago.) Whether *GP World* can set a different pace remains to be seen; however, I wouldn't be surprised to see it turn up in seaside arcades which tend to buy anything slightly novel for the summer season.

If you're not into kung-fu, then novelty will have to suffice until the manufacturers decide to take a few risks again. Personally, I can't wait. **ce**

# Hard Copy

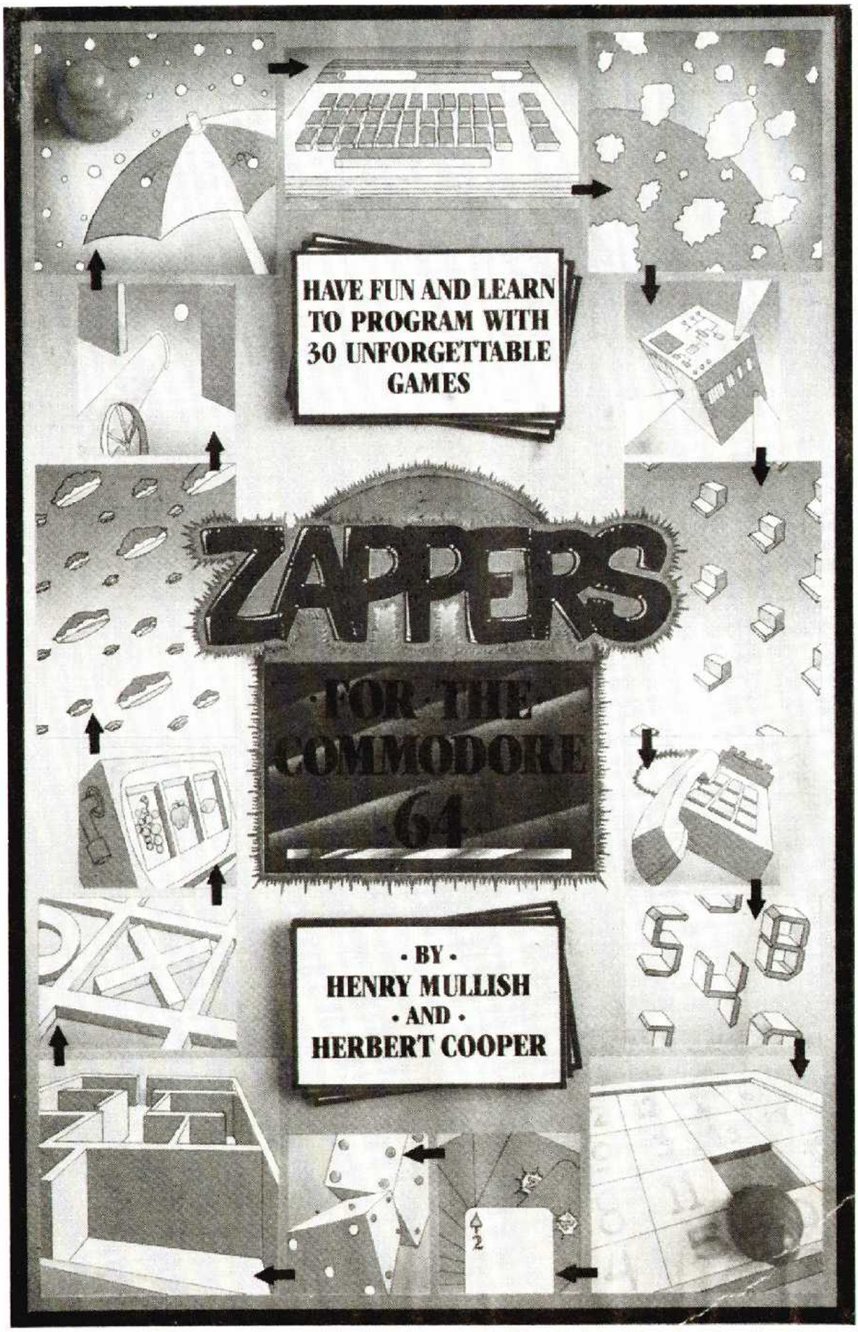
## Book Reviews for the Computer Literate

### ZAPPERS FOR THE COMMODORE 64

*by Henry Mullish & Herbert Cooper*
*Simon & Schuster Inc., 1984/$3.95*

The problem with books like *Zappers For The Commodore 64* is that you have to weigh the value of the time spent typing the programs against the price of software that has more sophisticated applications. While typing the *Zapper* programs will probably teach you something about programming, the games themselves are either mediocre or boring. The best part of the package is the use each game makes of the C-64's sound chip. Upbeat winning tones and losing boos add a humorous touch to what are really public domain programs.

Many of the games are of the kind that could be more fun and certainly easier without a computer. "Craps" lets you use your under-$1000 system instead of a pair of $1.00 dice. Remember playing "Hangman" with your school pals on a pad of paper while you were supposed to be learning state capitals? Now you can do it on your micro — ditto for "Tic-Tac-Toe." The book even provides a deck of computer "Concentration" cards — why didn't the authors include "Old Maid" while they were at it?



"Run Harry!" is a *Pac-Man* clone without the maze. In "Lander" you dodge meteors to reach the surface of the planet Commodon. If the program had added a blaster — and I wouldn't even have complained about the extra typing — the game would be more strategic. Other games test memory, math skills, and guessing ability.

As a tutorial, *Zappers* is useful in teaching the aspiring programmer how to integrate sound effects into a game by using PEEK and POKE commands. The authors list the variables, explain routines, and suggest enhancements and ways to combine different programs at the end of each chapter.

Some interesting utilitarian programs are included in *Zappers*. "Phone-y Words" has you input phone numbers you can never remember. The computer gives you every possible combination of the three letters corresponding to each number on the dial of your phone. Over 2000 words (sic) are generated, from which you choose one that makes sense and is easy to remember. "Biorhythms" lets you plot out your daily emotional, physical, and intellectual strength based on your birthday and human energy cycles.

If you need a pixel generater, "Etcher" lets you throw some splashes of color up on the monitor, while "Wallpaper" has the computer display a random background mosaic. "Morse Code" helps you hone your skills for the FCC's ham radio licence. (Remember ham radios?)

I suppose if you spent all your money on the C-64 with none left over for software, *Zappers* and other books like it will be a bargain. On the other hand, as software prices continue to fall, it might not be worth your time and effort spent typing in these programs.

*—Ben Templin*

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Reader Information Service for this issue expires August 12, 1985.

## THE PLAIN ENGLISH GUIDE FOR HOME COMPUTERS

*By Henry F. Beechhold*
*Simon & Schuster, 1984/$14.95*

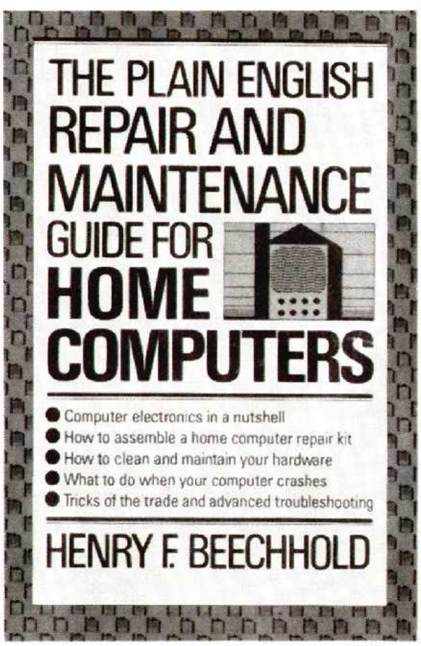
What can you say about a book that offers such recommendations as: When all else fails, read the manual, and If something works, don't fix it? One thing you can say for certain is that the author has a sense of humor. Henry F. Beechhold is that author, and his book, *The Plain English Guide For Home Computers*, encourages common sense before anything else.

Beechhold devotes chapters to such essential things as common-sense rules, necessary tools, and the spare parts needed for quick repairs. The book is written in a humorous tone, with cartoons in every chapter to highlight important points. These cartoons not only make the book easier to read, they also simplify some difficult concepts. One cartoon illustrates the warning that electrical interference can cause you to lose valuable data. It pictures a man sitting in a bus, trying to make sense of all the noise around him. The other passengers are O's and 1's, representing data bits. The caption reads, "A noisy bus leads to data communication problems."

A chapter called, "Do You See What IC?" details some easy ways to spot and replace a faulty integrated circuit (IC). One simple way is to check the temperature of the chips with your fingers. The only chips inside your computer that should be hot are the voltage regulators — any other hot chips are probably defective. But if a chip is not warm, it is probably electrically dead. Another interesting piece of advice in the same chapter describes the "piggyback" method of troubleshooting computer chips. You can place a new chip that is known to be working over a supposedly faulty chip, and test the computer. If it suddenly works, you've discovered the culprit and can replace the faulty chip with the new one. This technique eliminates unnecessary soldering.

*The Plain English Guide* really excels as a guide to interfaces and data communications standards. Standards such as the RS-232 are explained, and the book even contains hints and tips on making your own printer-interface. There are instructions on building a monitor cable, and you'll learn to construct little devices called "gender reversers." (Before you get any strange notions, let me explain that these are simply plugs that reverse the nature of a cable's connections.) These tips alone make the book a worthwhile purchase, considering the price of some cables and interfaces.

One very easy and useful project described in the book is the construction of a reset switch for any 6502-based computer. Popular computers that use the 6502 chip as their central processing unit include the Commodore 64 and VIC-20, all the Ataris except the new ST's, and the Apple II's.



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HENRY F. BEECHHOLD

*The Plain English Guide* is a well-written, informative introduction not only to repairing and maintaining computers, but also to understanding peripherals, computer chips, and the interfaces needed to hook everything together. After reading this book, you will be ready to open up your computer and improve, repair, or experiment. You'll need some technical data specific to your computer to do highly sophisticated repairs, but otherwise this book will suffice. It is full of good advice and easy projects that can make the time you spend with your computer more interesting and rewarding.

*—Robert Alonso*

## MACGUIDE: THE COMPLETE HANDBOOK TO THE MACINTOSH

*By Leslie S. Smith*
*New American Library, 1985/$14.95*

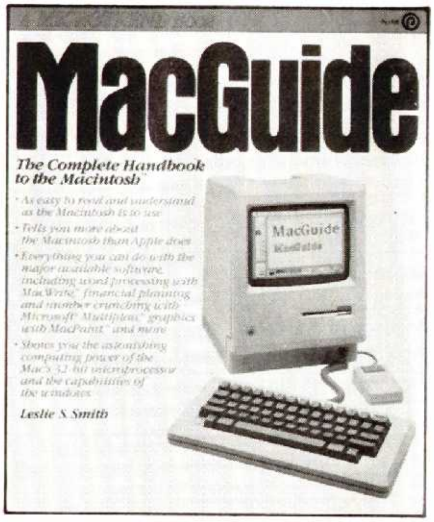
At first glance, *MacGuide* appears to be just another one of those computer manuals that take all the information from the documentation that comes with your computer, change it just this much (without making it any clearer) and call themselves complete handbooks. Imagine my surprise, then, when I found that it was, in fact, a complete handbook and a good one at that. Having read more than my share of computer manuals (a task for which I expect to receive something — a gold watch, perhaps, or lots and lots of money — in the next world), I have developed three theories about how they're written:

(1) The Dada Theory — Many manuals that come packed with systems or are available at bookstores appear to have been put together much like a Dada poem. That is, the author places all the words he will be using in the book into a hat and picks them one at a time, writing them down in the order they're chosen. Sometimes the procedure is done with chapters but this doesn't make anything any clearer.

(2) The Complex Complex — No matter how simple the process being described is, the prose used to explain it must be carefully selected to make it seem as impossible as possible. Thus, when you finally figure out how to do it, you are speechless over how simple it was to do and you are unable to figure out why the author didn't simply tell you how to do it.

(3) It Must Be Difficult or It isn't Worth the Money — This theory states that if something isn't difficult, it isn't worth the money.

None of these theories apply to *MacGuide*. This comprehensive manual is informative, thoughtfully executed and very easy to understand. It takes you through all the wonderful tricks your Macintosh can perform, and it does it in a well-organized, systematic way. It explains all the Mac terminology such as windows and menus, finders and folders and even goes so far as to talk about Multiplan, which, apparently, some people care deeply about. This book will give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Leslie S Smith
MacGuide

you a thorough education in the use of your Macintosh.

It doesn't have to be read cover to cover to be useful, however. It's equally good as a reference book. There is a handy glossary in the back and an exhaustive index which helps if you only want to refer to, say, Windows, Active. In a radical departure from the norm, the index actually lists entries as you would think they should be listed rather than under some obscure heading. For example, if you want to know how to clean the mouse, you look under Mouse, Cleaning.

The prose is easy to read and simple. Perhaps too simple. While we realize that the object of the book is to make operation of the Mac comprehensible to the huddled masses, it's cloying to read at so elementary a level over an extended period of time. And the author is often *way* too cute. Subheads, for example, tend to run along these lines: "The Mac Does Windows." And, then there are the MacTips. MacTips are set apart from the rest of the page and usually contain very useful information. Perhaps it is something about the Macintosh that inspires this rush to cuteness but was the term "MacTip" absolutely Mac-Necessary?

Still, this is just nitpicking and while we do love to nitpick we must also still be fair. *MacGuide* is a useful and instructive book that's worth owning if you really want to familiarize yourself with the computing power of your Mac. There's so much to be gotten out of this machine, it'd be a shame to miss anything.

*—Randi Hacker*

## THE ADVENTURE COMPANION

*By Gary Borders*
*Hayden, 1985/$12.95*

There's probably no such thing as a computer adventurer who hasn't gotten well and truly stuck in some game or other. And surely I'm not the only one who gets stuck at least once in almost every game. Once I even cornered a game designer at a press conference to weasel a hint out of him — any more time spent on that particular problem, and I would have thrown the keyboard through my monitor. But no matter how desperate I get, I'm still a little uneasy about turning to books like *The Adventure Companion.*

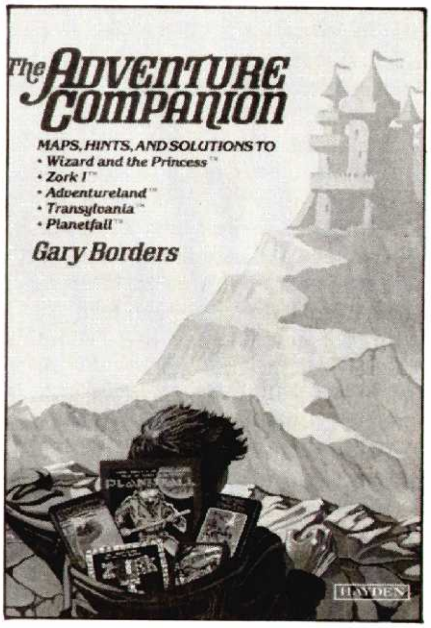
*The Adventure Companion* covers four adventures: *Planetfall, Wizard and Princess, Zork I, Adventureland* and *Transylvania.* Each game's section is divided into "Hints and Maps," "Glossary," and "Guided Tour." A scoring section is also included where it's applicable. The hints are questions pertinent to the different "geographical" areas of the game; they refer you to an appendix of answers at the back of the book. The maps, at least for the two games I've played (*Planetfall* and *Transylvania*), appear to be complete. And, as game maps spread over several pages, you can at least try not to see the whole game when all you want to know is where the SanFac is.

> The glossaries and guided tours really give the whole thing away.

It's the glossaries and guided tours that really give the whole thing away, though. The glossaries appear to be a somewhat idiosyncratic list of commands, objects and locations, along with an explanation of exactly what to do with them. The guided tours are just that: they'll take you through the entire game, telling you where to go next, what to pick up and how to use it. Where's the fun in that?

Some "hint books," notably the ones Infocom publishes for their own games, at least try to deliver you from temptation. If all you want is a little bitty hint to get yourself out of a real jam, you don't run the risk of having the entire game stripped naked before your eyes. *The Adventure Companion* gives you too much at once, even though the answers to the questions are shuffled around and buried in the back. Just reading through a glossary can tell you much more than you want to know.

As I see it, a lot of the fun of adventure games is that triumphant, smug feeling you get when you've finally figured something out — especially if the opportunity arises to enlighten someone else. (Which, now that I think about it, could explain why people write hint books in the first place.) Take *Planetfall*, for example. If you got successfully to the end of the game, weren't you thrilled to see Floyd again? Do you really think you'd be able to look Floyd in the eye (not to mention the Princess Sabrina) if you'd just taken *The Adventure Companion*'s "Guided Tour" and had been led step by baby step to the end?


The Adventure Companion
MAPS, HINTS, AND SOLUTIONS TO
• Wizard and the Princess™
• Zork I™
• Adventureland™
• Transylvania™
• Planetfall™
Gary Borders
HAYDEN

And, by the way, the book's introduction claims that "complete solutions are nearly impossible" unless you can devote excessive amounts of time to a game and consult with other players. I don't know about you, but that makes me want to go out and solve all these adventures with no help at all.

*—Louise Kohl*

# Q&A

## And the answer is. . .

By WILLIAM MICHAEL BROWN

Well, gang, there's still plenty of game-doctoring to do, judging by the volume of piteous mail that keeps piling up on my solid titanium-and-concrete desk, and threatens to collapse the floor joists and dump me and all my instruments into the midst of the folks who labor tirelessly in the toilet-seat factory that occupies the floor below. While I'm waiting for the building to be reinforced, I thought I'd share with you an item I recently received — something sure to pique the interest of all you hotshot C-64 techies out there, as well as offering a ray of hope for those of us afflicted with cobwebs-growing-off-the-nose-while-waiting-for-the-64-to-load syndrome:

"I read the recent article, "Things To Do While The Commodore Loads" (*Electronic Games*, February) with a great deal of interest and amusement; amusement, because it was a very well-prepared article, written entertainingly; and interest, because our firm has a potential solution for the problems pointed out in the article. We manufacture a low-capacity hard-disk drive at a price compatible with the Commodore 64 system. It has a 3.7-megabyte (formatted) capacity, and can be purchased for less than $400.00, retail. It is a 5-1/4-inch half-height unit, with a 5.0 mbit/second data-transfer rate and a maximum 10-watt power consumption. It also comes with a 90-day limited warranty, and we're working on offering a 5-year unconditional warranty.

"We do have one big problem: interfacing. The unit has an ST-506 interface which is compatible with most hard-disk controllers available for 5-1/4-inch hard-disk drives. Unfortunately, we don't have the resources available ourselves to work out the interfacing for the Commodore system.

"If any of your readers has a workable solution to this problem, I'm sure we can make a rewarding arrangement with the individual who helps us service the Commodore add-on-hardware market."

Now, hold on. I know what some of you are thinking: "At last — a *cheap* hard disk for my beloved 64! Where is this guy? What's his name? Where do I buy one *right now!*" That isn't what the man said; he's *asking for help in producing* an affordable hard-disk drive that will work with your 64. While I don't know this gentleman personally, and can't act as his (or your) agent in this matter, if you're the kind of person who knows both the 64 and hard-disk drives well enough to come up with some kind of solution to his problem, you might be doing all of us 64 owners a favor by getting in touch with Mr. Malcolm G. Smith, president, Josephine County Technology, Inc., P.O. Box 286, Grants Pass, OR 97526.

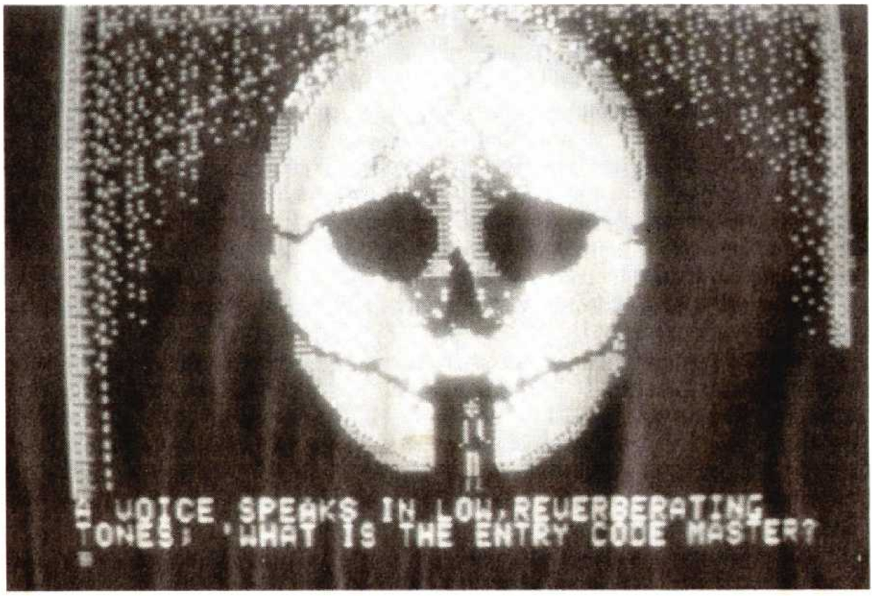
For the rest of us who must wait; well, I'll pass on any news as it happens. Meanwhile, on with the question-and-answer part of this evening's program (including a couple of hot tips on *Kings Quest*):

**Q:** *Regarding that question in the February Q&A about new games that are enhanced for the Mockingboard, I would like to know about the* old *games that the Mockingboard uses. (P.S., is this a run-on sentence?)*

*(Jeff Nelson, Raleigh, NC)*

**A:** We usually just handle games here, Jeff, but I think with a good pair of Etonics it might do a five-minute mile. As for Mockingboard-enchanced playstuff, here's a semi-complete list as of March, 1985: *The Spy Strikes Back*, *Bouncing Kamungas* and *Adventure Magician* (all from Penguin); *Landcaster* (Silicon Valley Systems); *One On One*, *Skyfox* and *Music Construction Set* (Electronic Arts, one and all); *Ultima III* (Origin Systems); *Zaxxon* (Datasoft); *Broadsides* (Strategic Simulations); *Maze Craze* and *Willy Byte* (both from DTI Datatrack); and *Under Fire* (Avalon Hill). Some are old, some new, and there may be more that aren't on this list; if it weren't for Ronny at Leighs Computers in New York, for instance, I might not have heard about *Werewolf*, a Mockingboard-enhanced game from Gambit — a company I never heard of before. Your local computer store may know of still more. If you're a programmer, you also might want to write to Sweet Micro Systems, manufacturers of your mocker (50 Freeway Drive, Cranston, RI 02920), and ask about their new software utilities for the board: *Developer's Toolkit* ($29.95; all kinds of music/speech programming aids specifically intended for the Mockingboard), *Speech Development System* ($39.95, and just what the name implies), and *Foreign Language Rule Tables* (for $24.95, you can teach your Apple to talk back to you in French, or with a British accent).

**Q:** *I own a Commodore 64, and have owned the game* Infidel *(Infocom) for almost a year. I have not seen the Pyramid yet — because I can't find it! Where is the*



A VOICE SPEAKS IN LOW,REVERBERATING TONES: 'WHAT IS THE ENTRY CODE MASTER?

*blasted thing? How do I find it?*

*(Mike Hinton, Ruston, LA)*

**A:** A *year* and you haven't seen it yet? Sure you aren't exaggerating these symptoms just a wee bit, Mike? If not, I feel for you — here, hold my hand. You're in the tent, right? Hear anything, like, say, a plane going overhead? Walk out and wave to the pilot; if he's as sympathetic as I am, he'll drop something down to you. Go get it and consult it: with what you learn from it, you'll be on your way at long last. Remember to wear your helmet, dear.

**Q:** *I'm getting a Commodore 64 for my birthday. I just heard that Commodore is coming out with two new computers. Will this make the 64 obsolete?*

*(David Itzkoff, New York, NY)*

**A:** Not at all, if you're referring to the new Commodore 128 and LCD portable, and I'm pretty certain you are. The 128 has more memory than the 64, and some extra doodads, but it runs the same 64 operating system and the same software. (In fact, the 128 is really a 64, with another whole CP/M computer and suitable memory for that operating system added into the box). Since both computers will run 64 software, it seems likely that the folks who've been making 64 hardware add-ons and writing 64 software will just go on doing it — but for both computers. The LCD portable is designed for people on the go who want a computer they can put in a briefcase; that was never a big market, so it seems likely that the 64 and now the 128 will be the standard for a good long while.

**Q:** *I'm interested in learning how to program my own games in assembly language on my Atari 800. Friends suggested that I buy* Machine Language for Beginners *from Compute Books, but I took a look at the book and it seems a lot too Commodore-oriented for me. Is there a book on this subject that really deals with the Atari computers?*

*(John Garber, Guerneville, CA)*

**A:** It doesn't have too much on games, but it's heavy-duty on the Ataris, and easy as eating to learn from: *Atari Roots — A Guide to Atari Assembly Language*, by Mark Andrews (Datamost, $14.95).

**Q:** *I own an IBM PC and have finished the game* King's Quest. *Do you know if there are any more games coming out with 128K or more and that resemble the* King's Quest *format?*

*(Bruce Ambrose, Edmonton, Canada)*

**A:** Sure enough, Bruce — and what else but *King's Quest II*, which you should be seeing advertisements for very soon. I can't tell you anything about the plot, but Sierra On-Line designer Roberta Williams and her team have created a game that actually improves the format: more music and sound effects, a bigger sentence parser so the game will understand more, and a rather more satirical sense of humor than was evident in *King's Quest.* The graphics also got a big revamp, and the animation is said to be more complex: the non-player characters you meet, for instance, instead of being restricted to a single area, can now move around randomly through dozens of areas — making the game even more lively.

King's Quest
SIERRA

**Q:** *I have a few questions about* King's Quest*: One, how can I get the axe out of the tree stump by the woodcutter's cabin; two, is there any way to get the fiddle in the cabin; three, how do you move the boulder in the cave by the condor; and four, is there any way to kill the witch and the sorceror? Please print this letter or at least send me a reply.*

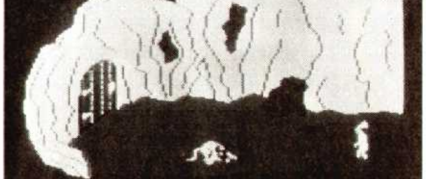
*(Scott Webster, Canaan, NH; also, Matthew Tracey, Flushing, NY)*

**A:** Five, I can't reply to *every* letter I get because I'm swamped with mail (and that's no joke); six, remember that there are always several solutions to every problem in *King's Quest*; seven, remember that non-violent solutions usually win you the most points; and eight, despite appearances, not *everything* in this highly animated game is really animated. This applies specifically to the axe; it's just scenery, so forget it. The fiddle isn't, though. If you'd like to have it, try noticing that the Woodcutter is kind of hungry. There's a magic household item ("something you find every day," Groucho Webster) nearby that, if you can figure out how to use it, might make the woodcutter grateful enough to *give* you his most precious possession. Rolling the boulder away takes another being's help; you'll find him (or it) if you take a trip down the wishing well. Instead of helping him out, though, try making him mad (some "mouthwash" might do it). You can't kill the sorceror; just try to avoid him (the magic shield can help if he attacks). To do in the witch, go into her house and hide in the bedroom until she comes home. While she's messing around with the fireplace, sneak up behind and pull a *Hansel and Gretel* number on her (you remember them, don't you?).

**Q:** King's Quest *really has me loused up. I'm particularly stuck with those leprechauns; how do you get past the first leprechaun, and then out of the whole area? Also, how do I get by the rat, how do I give the gnome the clue he is asking for, and is the Fairy Godmother's spell good for anything?*

*(Stuart Snaison, Palos Verdes, CA)*

**A:** Now look, you guys, you've got to figure out some of this stuff for yourself; that's supposed to be the fun of it, right? Lots of these things are interconnected; success in one area (generated because I gave you a clue) isn't necessarily going to save your bacon later. If you're a true adventure fan, you must be intrepid, persistent, resourceful, and endlessly confident of your eventual success. For you duffers though, I do have a few clues: First, the leprechauns *are* a real problem. You've got to have the magic mushroom with you before you even get near them, and to get the magic mushroom you have to (or usually have to) take a ride with the eagle. Go back to the eagle scene and try to climb aboard just when the eagle swoops past. The 'shroom ought to be near where the eagle drops you. You can figure out how to get it if you've ever gone mushroom picking before. To get by the first leprechaun, you'll also need the four-leaf clover, which is usually found right about where you would expect clover to grow. As long as you have this little item with you, he'll let you go about your business.



>look rat
It is a big rat with dripping teeth and small, greedy eyes.

# Q&A

**And the answer is. . .**

Once you've gotten amongst the little bleeders, get to the tiny cave and chow down on the mushroom. You'd better be fast, too, or you're not going to get out and you'll lose the all-important mushroom. Regarding the rat: He's hungry, and you ought to feed him if you want to make him reasonable. What you need to feed him is probably in the candy house (don't go in if Little Squeakbrains is talking), or you can just hand him something else (rats really go for treasures, just like you do). As for the gnome and his clue, you might pay a visit to the candy house on this fellow's behalf, also. Try writing the alphabet on a piece of paper, once forwards and once backwards, in two parallel rows. Then think back to a certain Brothers Grimm story about another gnome with a mysterious name, and the ability to teach frightened young women how to spin straw into something useful and very valuable. Once you remember this dude's name, try using it as a key to the two-alphabets code you just drew; write down each letter as it comes up, and give the gnome the word they make when he asks you for it. And yes, the Fairy Godmother is a good lady to know; her spell is protective, and useful against certain nasty creatures you'll meet.

**Q:** *In the February issue, Eric Bolog wrote in about his Vectrex. He said he loved it, and wondered what had happened to all the other "dead" computers. Well, I own a VIC-20, can't afford another computer right now, and anyway I love my VIC. But my local computer store recently stopped selling any VIC items, and I never seem to hear anything about the VIC any more. What happened? Why did the local store stop selling VICs? Is there anyone else there who owns one? What should I do?*

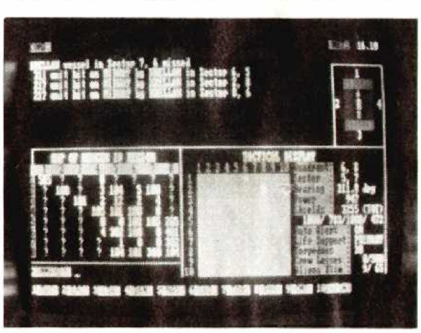
*(Dennis Hembree, Gray Court, SC)*

**A:** I really sympathize, Eric; it's pretty lonely, being a "computer orphan." Like the man says, though, those are the breaks; the world has moved on, to computers with more internal memory and more features than computers like the VIC have. But you don't have to stay lonely; there *are* plenty of people out there who love their VICs as much as you do, and plenty of companies eager to supply their needs for new software and hardware. I'd suggest you write to Cardco (300 South Topeka, Wichita, KS 67202) or Protecto Enterprizes (Box 550, Barrington, IL 60010); these two companies make dozens of hardware add-ons and sell software that can expand your enjoyment of the VIC. You can also try writing to Commodore and ask about what's available; whether your local store is helping out or not, Commodore is still supporting the VIC. They might even be able to let you know about groups of VIC users in your area with whom you can trade tips and other info about your favorite machine.

**Q:** *I've been playing a friend's copy of* Star Fleet I *for about a month now — at his house, since he has an IBM PC, and I can only find the game in that version. When are they going to release it for other computers? I'm getting impatient. Another thing: How do you make Admiral in this game? I'm going crazy trying to cope with everything that comes flying at you in the upper levels (I'm a Rear Admiral right now). Any help you can give would be appreciated.*

*(Chester Skolnick, Bethesda, MD)*

**A:** The folks at Cygnus tell me that they're working very hard on alternative versions of the games for the Apple, C-64 and maybe even the MacIntosh; the C-64 version should be out very soon. As for making Admiral, Admiral Emeritus Randy H. Waibel has a number of recommendations: (1) Select long missions (you get more shots at more aliens than in medium and short missions). (2) Find starbase early and avoid battle until you do (you will probably have to save the starbase the first time you find it, and you'll need to be at full power to do so). (3) Monitor the starbase quadrant all the time (so you don't get caught at low power, dozens of quadrants away, and flatfooted). (4) Go back to starbase for resupply before you absolutely have to (you may find an alien slipping into the quadrant at the same time you do, and he could destroy you if you're dangerously low on power). (5) Always keep your Primary Life Support system in good repair (intruders and ion storms can damage this critical system whether or not you've been in combat, and you're highly vulnerable until it's repaired). Those are only some of his tips; there are plenty more to be found in Cygnus' *Star Fleet Officers Academy Training Manual*, which is free to all registered owners of the game who write to the company at P.O. Box 57825, Webster, TX 77598. If you can't find the game in your local store, you can order it from them direct. If you write, you might also ask them about the Star Fleet BBS they're planning to start soon, and upcoming releases of *Star Fleet II* and *Star Fleet III*.



**Q:** *What's the best way to clean your computer equipment? There's a lot of dust on the outside of my monitor, and in the cracks of my keyboard.*

*(Charles Diltz, Madison, WI)*

**A:** A clean, soft, dry cloth for the monitor; a small vacuum, like Black & Decker's Dustbuster II, for the keyboard. That's what I use, anyway. Whatever you do, don't use alcohol, ammonia or other caustic products on computer plastics.

Well, Commanders, Adventurers and aspiring hackers, that's it for this month. Just a few words of wisdom before signing off. Boldness may get you far in fantasy adventure games, but don't forget the old proverb, "He who strikes and runs away, lives to fight another day."

# BOOT & SHOOT

*Continued from page 49*

the paper.) Line drawings can be scanned in a "high contrast" mode — actually the best, since it yields the highest resolution — and photos can be halftoned to simulate gray scales.

Unlike *MacVision*, the *Thunderscan* software (written by Andy Hertzfeld, another key member of the original Macintosh design team) lets you vary the contrast and brightness of the scanned image by adjusting pointers on the screen with the mouse. Unfortunately, re-scanning an image to correct problems caused by the original settings can mean waiting another 14 or more minutes to see the results, although some adjustment in gray scaling can be made by asking the program to halftone the picture again.

Capturing images with a video camera and working on them with *MacPaint* is incredible fun.

Like *MacVision*'s software, the *Thunderscan* program will let you save your pictures as *MacPaint* files or select only portions of the picture to be saved on disk. In addition, it allows the creation of a special *Thunderscan* file that contains all of the gray scale information as well as a basic, high-contrast version in a *massive* file of more than 100K bytes for a single picture. Although these picture files carry very complete information, they are really impractical, since each Macintosh disk can store only 400K bytes, itself. Finally, since the Thunderware program is a completely separate application, it cannot be run at the same time as other programs like *MacPaint* or *MacWrite*.

The software does contain some novel features, though. You can select the area of a page to be scanned and choose a 50% reduction or up to 400% enlargement of the image. (Large images bigger than the 8½- by 11-inch limit of *MacPaint* documents, can be saved and printed as a scanner image only by the *Thunderscan* program itself.) Some of these features, such as re-halftoning and storing very large pictures in the memory of the computer are limited when the *Thunderscan* is used with anything less than the expanded 512K Macintosh.

Other nice features of Hertzfeld's program include the ability to manipulate the image, via adaptations of *MacPaint*'s tools such as the single-pixel "pencil," the "eraser," and the "fatbits" mode. (With fatbits the picture is enlarged dozens of times for work that demands accuracy.) For printing, the program offers a "high resolution" mode which prints the image with 4 times the number of dots per inch as *MacPaint* does. This is more a novelty than a practicality, though; the printed picture is one-fourth the size of the original scanned image, and it is easier and faster to take a page to a copying machine for better reproduction.

The results from *Thunderscan* can be impressive, though. Photographs with many shades of gray look excellent on the video screen, almost as good as real, analog video if you stand back a few feet. Pictures produced from line drawings, particularly art prints, reproduce very well in the high-contrast mode and look best on paper. Several public domain pictures files — mainly digitized versions of M.C. Escher drawings — available via Macintosh user-groups and CompuServe are excellent demonstrations of *Thunderscan* at its best.

## THE POSSIBILITIES

Now that we've got these pictures, what can we do with them? Digital pictures are a new source of information that computer users must now find novel uses for. Taking and printing pictures via the Macintosh provides marvelous entertainment all by itself. But what else can we do with this new capability?

Well, the prime use for the Macintosh — whether Apple wants to admit it or not — seems to be preparing documents. To this end, video and digitized graphics offer enormous possibilities. Graphic elements can be photographed from life or scanned from other artwork, then integrated into reports, letters, and brochures. Other programs, such as Microsoft's *File* can store pictures as well as text, so that databases can now contain images of people and things in addition to information about them.

*MacPublisher*, an extremely powerful and innovative electronic publishing program from Boston Software, lets you set up entire pages of multi-column text and illustrations for preparing books, magazines and newsletters. *MacVision* gives *MacPublisher* its photo department, and with *Thunderscan*, other printed images can be clipped and incorporated into a layout. With these, in-house publishing becomes a practical proposition. A single newsletter editor can also be both art director and typesetter.

Microsoft BASIC can accept images from *MacVision* and *Thunderscan* (when it saves a picture as a *MacPaint* document). So, for the first time, it is possible to incorporate high-quality photographs and illustrations into a program you write. Also, these kinds of pictures make interesting new "startup screens" for the Mac which can be used as a replacement for the otherwise common (and dry) "Welcome to Macintosh" screen that comes up when you turn the machine on or reset it.

A program for doing this with amazing ease has been written by Bill Atkinson and is available on CompuServe and through user groups. Another handy public domain program for working with images and transferring them between programs is a "desk accessory" called *Art Thief* (also known as the "Paint Grabber") which allows you to swipe images from *MacPaint* files and paste them into any other program.

*Thunderscan* and *MacVision* pictures open up possibilities for personalized stationery and business cards, especially for the "telecommuter" who may live and work hundreds of miles from his clients. Memoranda that refer to visual matters — maps, illustrations, technical drawings — can incorporate these pictures with words.

Dr. David Thornburg, chief scientist

## The age of microcomputer graphics that mirror the real world is here at last.

for Koala Technologies (and the inventor of the KoalaPad graphics tablet) has prepared a little pamphlet called "A Dozen Ways to Use MacVision." Included among his suggestions are letterheads (photographed from printed stationery but printed as part of a Macintosh document), employee badges (it's simple to march workers in front of a video camera and use the image for their company I.D.), personalized greeting cards (*MacVision* should sell well at holiday times for this one), quick advertising materials, organizational charts, and more.

Finally, there's the prospect of computer art T-shirts. The Underware is a special replacement ribbon for the Apple Imagewriter, the NEC 8023, C. Itoh Prowriter, Epson MX and FX printers. It allows you to print pictures on plain paper, then iron them onto T-shirts (or any other cloth) for washable, permanent designs. Each $20 ribbon yields 30 to 100 transfers, according to the manufacturer.

### THE LIMITATIONS

If all of this sounds great, it is. But the price of incorporating these high-quality graphics into your computer applications is not cheap. Koala's *MacVision* system sells for $399.95, without the necessary video source, and *Thunderscan* — with all of its limitations — is priced at $230. Another video digitizer we did not test is *Mac Private Eye*, from I/O Video, Inc. This system costs a whopping $600 ($800 with a black-and-white video camera) and works like *MacVision*. Its chief improvement is in the time it takes to work on a picture. *Mac Private Eye* claims to digitize a video frame in real time — 1/30 of a second.

Here are some of the limitations we found in these systems:

*MacVision*, the better bargain, requires careful lighting to produce good digitized video pictures, and you should really use another monitor (or the electronic viewfinder in a video camera) to focus and frame your shots. A good marco lens —a standard on most home video cameras these days — is necessary if you want to copy graphics. The only difficulty we had in making *MacVision* work as advertised was when we used it with a videocassette recorder. The still frame on even a top-of-the-line VCR (in this case, a Panasonic NV-8500) was still too jittery to produce an acceptable image. None of these problems, though, was enough to make *MacVision* any less fun or useful.

We had more trouble with *Thunderscan*. Despite the addition of the white tape on the platen (for alignment and synchronization), the *Thunderscan* is inaccurate — so much so that it cannot capture a vertical line or edge without turning it into a jagged one. Users have complained, too, of random shifts in horizontal scan lines (by several pixels) that can ruin a picture after scanning for ten minutes or more. The system's software, too, is curiously sluggish and unresponsive for a Macintosh program. (We thought our mouse was broken or damaged, the way it worked with *Thunderscan*.)

Worst of all, we couldn't get information or any other kind of support from *Thunderscan*'s manufacturer, Thunderware, even though we tried again and again to contact someone with the company who could answer our questions.

The weak link in all of these schemes is the Imagewriter printer, which cannot print complex halftoned images of many dots without error. Mainly, the Imagewriter leaves black horizontal lines in dark or gray areas. If it does this while printing, you can be certain there is considerable error when it is scanning an image as well. We did find that a carbon ribbon (sold by Boston Software) increases print quality, but doesn't completely eliminate the horizontal streaking.

There are differences, too, in the way that some Macintosh software proportions images. A *MacVision* image, for example, looks slightly "fat" in *MacPaint*, but not in *MacWrite*, *A Thunderscan*ned image looks *very* thin in *MacWrite* unless you choose the "Tall Adjusted" option on the "Page Set-Up" menu, and still looks narrow when printed with the necessary correction.

### WHAT'S IN STORE?

The future of this kind of image-processing is a bright one. Although neither Koala Technologies nor Thunderware have yet introduced any additional software to work with their respective systems, other applications are obvious.

Thunderware touts the *Thunderscan*'s use as a slow-speed facsimile machine when used with a terminal program like Apple's *MacTerminal* (which can send and receive picture files) and a modem. But Thunderware doesn't tell you how to use its system for this application and somebody should (and probably will) write a program to make sending pictures over the phone lines a practical reality.

Dealers we spoke to said that Thunderware will try to write a program for scanning text, too, so that it can be entered as a file to be edited by a word processor. The company will first need to improve the accuracy of its system before this is technically possible, though.

*MacVision*'s future looks brightest when you consider its capabilities for robot vision and pattern recognition, two rapidly emerging technologies. And there's no telling what kinds of programs could benefit from having a small, slow-scan video window as part of the operating screen. (What about a slow-scan video telephone, using the Macintosh and *MacVision?*)

Both of these systems are likely to be adapted for the new Atari ST computers and Commodore Amiga, as well, when they become available. These machines are supposed to exceed the Mac's exciting graphic resolution and are at least as fast.

We can be thankful that the era of graphics requiring imaginative support is ending. While there are problems and limitations in the graphics-enhancing hardware and software yet available, the door to a new technology has been opened. The age of microcomputer graphics that mirror the real world is here at last.

## ELECTRONIC GUTENBERG

*Continued from page 36*

only real reservation about *Fontrix* is all the time it takes to center each line (at least in the Apple version). The print quality of both programs varies (mostly depending on font) between excellent and great.

The big news in printer software is Springboard's *The Newsroom* ($49.95, Apple II series/IBM PC/C-64). This newsletter program may be the ultimate in complete and integrated special application packages (only *Sidekick*, the IBM PC desktop package, comes to mind). Check out this graphic menu: an editor sitting with his feet on the copy desk, a darkroom door labelled "Photo Lab," an artist hunched over a drawing table labelled "banner," a man talking on the phone representing the "wire service," a worker standing at a paste-up board doing "layout" and printing presses rolling in the background.

The editor/writer is equipped with a rudimentary word-processing program (plus five fonts) that serves as little more than a typewriter; you use this to type in your stories and headlines. Inside the photo lab is a "clip art" file; all sorts of images are stored here and can be changed by using the built-in drawing program, which works with a joystick. The banner means "logo," which is the title of your newsletter; it too can be created from scratch, using a selection of six fonts. Wire service copy and art can be transmitted over phone lines; this is probably *Newsroom*'s master stroke, for it allows a team of writers and artists to pull the paper together from all over town (or all over the country, for that matter). Anyone who has the software can send and receive information. But before you can get a finished product, the layout has to be done. This is where the program is most helpful, arranging everything into a neat two-column format. Then tell the pressman to get to work, and watch the newsletter file out of your printer. *The Newsroom* is an incredibly innovative package that should put a crimp in *The Print Shop*'s domination of the home-productivity software market.

The printer programs discussed so far are noteworthy primarily for their ability to perform varied tasks. *Fancy Font* ($180) by SoftCraft can only do one thing, but it does it superbly. Available for several MS-DOS and CP/M machines, it effectively converts your Epson (or clone) dot-matrix printer into a convincing daisy-wheel quality machine. (It instructs the print head to pass over the document six times.) If you send business letters or print other documents where appearance is critical, and you've been thinking about replacing your printer with a daisy-wheel, *Fancy Font* could easily change your mind.

Fifteen fonts come with the package. Another 50 can be purchased individually on font disks (one font per disk) for $15 a piece, as well as several utility programs which enable you to create your own character sets, improve the interface with your word processor (the master program will print most text files in the CP/M, ASCII or MS-DOS formats) and perform other handy tasks. On the negative side: *Fancy Font* is very picky about hardware (primarily the interface card and printer) and may not work with your set-up.

In addition to the programs mentioned here, there are others that can, in one way or another, enhance and/or expand the capabilities of your printer. With careful research, the chances are excellent you'll find the one just right for your needs. If you're more interested in graphics, watch for a future article that will look at software that can do for images what these programs do for text.

# BUILDING A BETTER ZORK

*Continued from page 28*

HIT THUG," he added with a laugh. But he still thinks the moral matrix will make it into a future game.

Over the winter months leading into 1984, Pinsky wrote many of scenes, sharing ideas with Mataga and Wolosenko. Gradually, five minds emerged, fictional characters based loosely on historical figures. The adventurer would journey through the minds of the five dead people, their brain impulses still preserved on some higher plane of existence. The game would start on a stage with thousands of people watching. This was the mind of Bobby Clemon, an assassinated rock star. Three other minds were of The Generalissimo, a dictator and war criminal; The Poet, a semi-autobiographical figure from the mists of history; and Dr. Eva Fine, a "female Einstein", who had been a schoolmate of The Generalissimo, and had developed the weapons that defeated him. Her dying words also became a Bobby Clemon peace song.

This may be the first serious challenge to Infocom's text adventures since Infocom waltzed in and took over the software charts.

The fifth mind was that of The Cave Master, a mysterious, prehistoric, ape-like being who apparently invented the lever, the flint blade, the cave painting, and group chanting. The object of the quest was a Wheel of Wisdom — Pinsky's Figured Wheel — which had inspired The Cave Master.

It was a dense, layered structure for a computer game, which pleased Wolosenko. "I was never particularly interested in adventure games," he said. "The puzzles weren't especially compelling, and they were just full of dead ends. You really had to accept a lot of assumptions about how limited your world was going to be in order to be able to enjoy it. We wanted a game that wouldn't require a specialized audience of computer hackers, and also a game that would surprise the author that wrote it. Those were the ideas I presented to Robert."

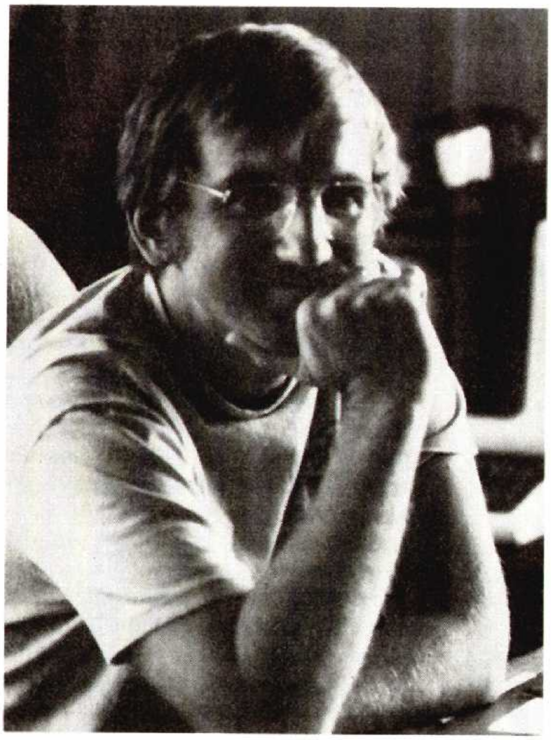
But Mataga also knew it had to satisfy veterans of Infocom games, so he set to work to improve his parser further. He started by including all the standard Infocom commands. Then he began to include capabilities that Pinsky asked for. Pinsky kept asking what the limits of the parser were, and Mataga kept saying, "You just tell us what you want to do, and we'll figure out a way to do it, and let you know if we can't." For instance, Infocom's parser didn't let characters in two different rooms interact with each other, even though there might be an open door between them. *Mindwheel* characters can do so — as long as the door is open.

The program has another intriguing innovation. In most text games the contents of any room are static; if you remove all the useful objects from a room, there's no reason to go back — unless you forgot to look under the bed. *Mindwheel*'s rooms are not merely convenient storage areas, they're stage sets. You can go back to a room, and instead of finding empty space, discover new characters or objects there.

Eventually Mataga's parser contained 1200 words; Infocom advertises recognition of 600 words in its games. It makes sense: The more words an adventure game understands, the more realistic it seems.

Now that the basic story was laid out, progress on the game dragged. "There was a big, long kind of a nothing period, where I was generating a lot of text, narrative chunks," Pinsky said. At this point, in February 1984, Wolosenko brought in a second programmer. Steve Hales, author of *Fort Apocalypse*, entered the *Mindwheel* project. "That's when the synergy really began," Wolosenko said.

"He was just a mechanic," Pinsky said. "He just wanted to get it done. Then we started getting chunks of the thing that would work." The two pro-



Ihor Wolosenko, co-founder of Synapse: *"In order to increase the feeling of reality in a game, you have to incorporate time in some way."*

grammers had different styles. "William [Mataga] invents by thinking of defects," Pinsky said. "Steve's attitude was more, just get the car on the top of the hill, push it down, jump in and we'll worry about it the next time we have to start it."

Hales started using scene maps, jottings on paper that showed the different twists and turns that the tale would take. Pinsky would scribble some information down on paper, hash it out with Hales, and Hales would turn it into code for Mataga's parser. After this went on a while, Pinsky didn't have to write down as much, but Hales still kept scene maps for every point of action in the game.

The main innovation *Mindwheel* brought to adventure games is the idea of the scene, the idea that a character can continue to accomplish different things depending not upon which room he's in, but on what point it is in the game. Wolosenko said it reflects the way real life is. "If I'm in a room and I look at someone, and if I look at him two seconds later, something is going to be different. In order to increase the simulation and the feeling of reality [in the game], you have to incorporate time in some way."

At one point, Hales handed Pinsky a table of words. He wanted Pinsky to write a sentence for each word, with a blank spot for an object. With ideas flying back and forth, and the creators allowing for any number of far-out commands from the adventurer, Hales also realized that the game was bumping up against the memory available, so he recommended Pinsky scrap using the fifth mind, that of The Cave Master. Pinsky decided The Cave Master's mind wasn't fitting in anyway.

Hales started polishing portions of the game. In "Spaw's chamber," the player had to solve a "Fear Sonnet," filling in missing words in a poem. That sequence took Hales two weeks, working 70 hours a week, and talking by telephone with Pinsky, who enjoyed visiting Synapse because the programmers treated him as just another writer, instead of a noted poet. For their part, the programmers were impressed because they could ask Pinsky to bang out some words for the game, and Pinsky, who is prolific as well as talented, would usually deliver them the next day.

About this time, Mataga became less involved in the project. His primary contribution, the parser, was just about complete. He even nicknamed it BTZ, for Better Than *Zork*. He was working on other Synapse electronic novels, with names like *Essex* (Bill Darrah's game) and *Ronin*.

Mataga also had to start putting the Synapse games on other computers. The first versions of *Essex* and *Mindwheel* were still running on Atari 800s. But with programs approaching 200,000 bytes of code, the programmers were running them on systems with up to eight Atari disk drives. Heat and failed floppy disks became a major problem. Then Synapse switched to using IBM PCs as a program developing system; a Corvus Omninet tied different computers in the Synapse office together, letting programmers share files and a common hard disk. The change made Mataga start most of the coding from scratch, but it was worth it. "We leave these IBMs on all the time," Mataga said. "They work pretty well."

Pinsky gave the game a humorous flair at many points. "In one room you're in a bank," he said. "It's an incredibly boring bank, with a senile robot who's trying to cash a quasi-personal check, and it's taking forever. You know somebody's going to capture you if you can't get through the line. The messages that come just say, 'A fly strolls numbly across the ceiling.' And you have to figure out a rather *Zork*-like physical puzzle to get out of there."

By August 1984, 90 percent of *Mindwheel* was done, and the creators were constantly playing the game, searching for improvements. "I don't know how long I spent just playtesting," Pinsky said. "When was I playing and when was I working on it? It just was not hard time."

During Pinsky's playtesting, Wolosenko's prediction came true; Pinsky was surprised by his own game. "My daughter and I were playing it. There's a chance thing where a lizard can kill you," Pinsky said. "Repeatedly, he was just sinking his teeth into us and killing us. So we ran up the tree. The lizard was down below. We had the frog [Irv, the game-player's sidekick, who sometimes dispenses helpful hints] with us. First, we gave him a disk. And we said, 'Irv, go down and kill lizard with disk.' And Irv said, 'All right, boss, I will try to do as you ask.' And he goes down and then we got the message where the disk goes across the lizard, purple pus comes out and Irv killed the lizard! I was there yelling! He killed the lizard! And nobody in the world knew that could happen. That was my single favorite moment. Irv the frog saved us."

In October, Synapse started extensive playtesting of the game. Mike Heinstein, an avid Infocom player, gave it a good review. But Hales was still nervous about the public reception. He didn't believe the product was real until its January announcement, when he got a copy of the book that would introduce the game and contain the multiple floppy disks in the 190K-byte game.

There were also still a few last-minute refinements. Most of them involved writing messages for unexpected things the playtesters attempted. There had to be a "splat" message if a player jumped off a balcony. The process could have gone on forever, but finally it was done.

*Mindwheel* may have been the most exciting text game for Wolosenko, Mataga, and the others, but it is merely the first in an electronic novel series due out this year; they may be the first serious challenges to Infocom's text adventures since Infocom waltzed in and took over the software charts three years ago.

This first group of Synapse text games run on Commodores, Ataris, and Apple IIs, as well as IBM PCs and Macintoshes. Wolosenko looks forward to having even more memory for future games. "It's going to mean richer representations and faster response time," he said.

Richard Sanford, project manager for *Mindwheel* in its final months, said each Synapse game will involve some experimentation with the text adventure genre. "In *Breakers*, we'll have a more or less completely open environment. We're trying to cover a lot of ground that is not yet invented," Sanford said. **ce**

## DO-IT-YOURSELF SOFTWARE

*Continued from page 25*

*Set*. Despite a cumbersome title, *CNCS* is an excellent piece of software. Any repetitive or dull work is taken care of by the computer, while overlapping on-screen windows allow you to work on any part of the game at the touch of a button. The emphasis in this program is on the writing aspect of adventure design, which, after all, is the logical emphasis for an all-text game. *CNCS* is both simple and fun to use, especially because of its numerous special features which allow for timed and random events (both are crucial for mystery adventures), a simple scoring system, and a full-sentence parser which lets players use commands like "TURN DOWN THE VOLUME ON THE STEREO" instead of "GO BOOKSHELF."

Of course there is one type of adventure in which vocabulary is not a concern. Generally known as "flowchart fiction" and more colloquially as "Choose-Your-Own-Adventure" fiction, this sort of branching story has been around in book form for many years. Now, in *Story Tree*, Scholastic has brought it to the computer.

*Story Tree* stories are action-filled tales of adventure whose narrative halts at certain key plot junctions and gives the reader a number of choices as to how the main character ought to proceed. A right choice means that the story continues until the next plot junction; a wrong one more often then not is fatal. The program helps youngsters write this sort of interactive fiction by prompting them through the process of writing the main plot line and making choices. On the whole, *Story Tree* is enjoyable, if a bit limited in its format.

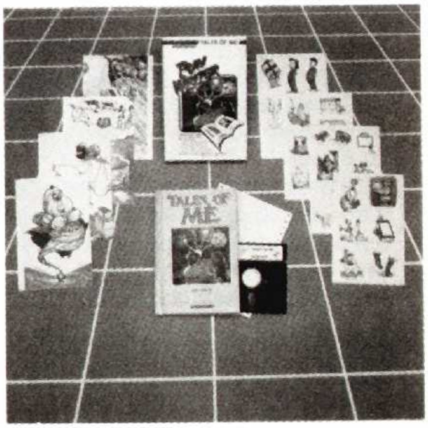
Woodbury's Playwriter series is also a set of writing programs intended for children, but these are probably going to be enjoyed just as much, if not more, by teens and adults. The series uses multiple-choice and short-answer questions to prompt users through the writing of a short story. Full of amiable and humorous touches, the programs come with illustrations, special paper, and even a hardcover binding. You can edit or re-write the whole story if you don't like Woodbury's plots. The programs in the series are *Tales of Me*, *Adventures in Space*, *Mystery!*, and *Castles and Creatures*.

There are story construction programs for younger children too, and Spinnaker makes two of the best — *Story Machine* (for ages 5-9) and *Kidwriter* (for ages 6-10). *Story Machine* provides kids with lists of nouns and verbs with which they can make sentences. These sentences are then animated in a little on-screen cartoon. *Kidwriter* is slightly more advanced; here the child writes a story and then illustrates it with characters, shapes, and backgrounds from a disk-based menu. Both programs are entertaining and attractive; the graphics in *Story Machine* are especially endearing compared with the less-refined *Kidwriter* cartoon.

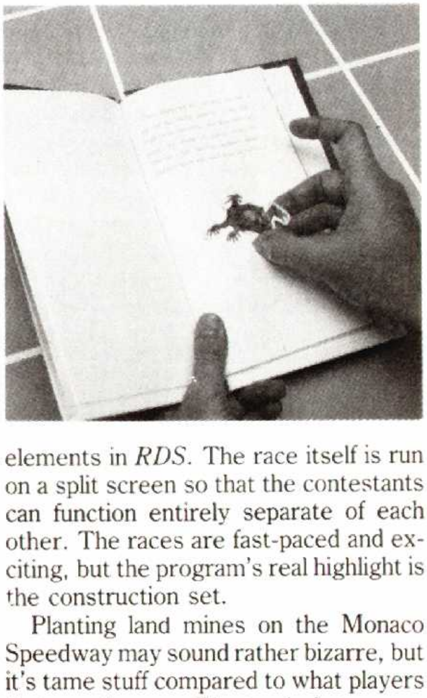
An entirely different sort of construction set is to be found in Epyx's *Hot Wheels*, a completely innocuous game based on Mattel's world-famous line of toy cars. In *Hot Wheels*, would-be Mario Andrettis are invited to design and build their own racing cars out of various parts in the computer's inventory. Once constructed, these cars can be driven to any of several activity centers where they can be repaired, washed, fueled, or entered in a demolition derby.

**Today's do-it-yourself software boasts the best technology that home computers have to offer.**

A similar idea is the basis of Electronic Arts' *Racing Destruction Set*, in which players choose and modify cars, roadways, and racetrack hazards in preparation for a spectacular race. Ice patches, land mines, lunar gravity, and armored stock cars are only a few of the many elements in *RDS*. The race itself is run on a split screen so that the contestants can function entirely separate of each other. The races are fast-paced and exciting, but the program's real highlight is the construction set.



Woodbury Software's Playwriter series lets you create your own hardcover book, complete with illustrations.



Planting land mines on the Monaco Speedway may sound rather bizarre, but it's tame stuff compared to what players do in another new Electronic Arts game, *Mail Order Monsters*. *Mail Order Monsters* gives players the task of designing monsters with all sorts of strange powers and exotic attributes. A fanciful and intriguing game, *Mail Order Monsters* is a graphic masterpiece, with even the oddest monsters depicted in impeccable detail. The creatures in question often turn out looking like a mistake in genetic engineering, but there is something fascinating about them. An oversized fern with hands carrying a submachine gun may not be the most attractive thing that's graced my monitor, but it has to be one of the few that I've remembered after turning the game off.

The fern's gun comes into play in the action phase of the game. In this section a hideous menagerie evolves on the screen to take part in one of three types of battle. Like misshapen behemoth gladiators, they pummel each other into submission in the kill-or-be-killed realm of *Destruction*. With some amount of animal intelligence they band together against a common enemy in *The Horde*; or they participate in a non-violent strategic version of "Capture the Flag." The games are all interesting, but again, the real reason to buy the program is the construction set.

On their own or as parts of other programs, construction sets are constantly improving; today's do-it-yourself software represents the best technology that home computers have to offer. Multi-faceted, complex programs like *Adventure Construction Set* and *Mail Order Monsters* show off more clearly than any other type of program the capabilities of modern home computers.

Not only are construction sets fun and interesting — though they are that too, and thought-provoking as well — but they are also the vanguard of our newest technology. It is said that if you sit a bunch of monkeys at a number of typewriters for an infinite amount of time, they would eventually type up the script to *Hamlet*. Well, *Adventure Construction Set* has an option which allows players to do no more than sketch an outline of a world and then have the computer write an adventure around it. At one point I had the computer create an entire adventure from scratch, and while the result wasn't *Hamlet*, it was far better than many similar adventures written by professional game designers.

And it only took twenty-eight minutes. **ce**

## COMPOSE YOURSELF

*Continued from page 33*

*certWare* is slower in certain respects and the graphics are less active, the sound quality and printing features are superior to *MusicWorks'*. And *ConcertWare* isn't limited to 64 bars of 4/4 music as is *MusicWorks*.

There's one music application worth mentioning for the Apple II series. *Musicland*, created by the University of Toronto, allows you to explore music by making pictures. The pictures are then

# musical

### How to read this chart:

**The number refers to generations (1-4); whether or not the program has print capability follows the number; whether or not the program requires the use of a piano-like keyboard follows that; and the letter (A-D) refers to the recommendation. (A = Highly recommended, B = recommended, C = not recommended, D = avoid.)**

**Generations are defined as such: 1 = computer keyboard input/menu driven (circa 1981), 2 = joystick input/colorful graphics (1982), 3 = exploits hardware to the fullest, 4 = features Macintosh-type windows and pull-down menus.**

### SOFTWARE
### *For the Commodore 64*

| | |
|---|---|
| **MOONDUST**<br>(Creative) $44.95<br>*A great music-video game.* | **3/no/no/A** |
| **MUSICALC**<br>(Waveform) $29.95<br>*Outdated already.* | **1/yes/no/C** |
| **STUDIO 64**<br>(Entech) $39.95<br>*Primitive.* | **1/no/yes/D** |
| **MUSICMATE**<br>(Sequential) $39.95<br>*Simple, musical & efficient.* | **1/no/yes/B** |
| **SONG BUILDER**<br>(Sequential) $39.95<br>*Out of touch, out of mind.* | **1/no/yes/C** |
| **SONG EDITOR**<br>(Sequential) $39.95<br>*See above.* | **1/no/yes/C** |
| **SOUND MAKER**<br>(Sequential) $39.95<br>*Ditto.* | **1/no/yes/C** |
| **SONG PRINTER**<br>(Sequential) $39.95<br>*Adequate for some uses.* | **1/yes/yes/C** |
| **MUSIC CONSTRUCTION SET**<br>(Electronic Arts) $40.00<br>*Outshined by recent entries.* | **1/yes/no/C** |
| **BANK STREET MUSICWRITER**<br>(Mindscape) $49.95<br>*A tedious music typewriter.* | **1/yes/no/C** |
| **MUSIC PROCESSOR**<br>(Sight & Sound) $34.95<br>*Teaches pitch & counterpoint.* | **2/no/yes/B** |
| **3001 SOUND ODYSSEY**<br>(Sight & Sound) $34.95<br>*An animated tutorial.* | **2/no/yes/A** |
| **KAWASAKI SYNTHESIZER**<br>(Sight & Sound) $39.95<br>*Fun, instructive, unique.* | **2/no/yes/A** |
| **KAWASAKI RHYTHM ROCKER**<br>(Sight & Sound) $34.95<br>*Arcade game meets light show.* | **2/no/yes/A** |

# software

**MUSIC VIDEO KIT** 3/no/no/A
(Sight & Sound) $49.95
*First-generation MTV erector set.*

**RHYTHM MASTER** 1/no/yes/B
(Melodian) $40.00
*Keyboard technique trainer.*

**CONCERT MASTER** 1/no/yes/C
(Melodian) $40.00
*Simplistic keyboard pieces.*

**MUSIC STUDIO** 3/yes/no/A
(Activision) $29.95
*The best of the bunch.*

**MUSIC SHOP** 4/yes/no/A
(Broderbund) $44.95
*Fewer bells and whistles.*

**MACMUSIC** 4/no/no/A
(Passport) $49.95
*Versatile & different.*

### *For the Apple II series*

**MUSICLAND** 3/no/no/B
(University of Toronto)
*Needs synth card. Very instructive.*

### *For the Macintosh*

**MUSICWORKS** 4/yes/no/A
(Hayden) $79.95
*Wonderful writer/player/printer.*

**CONCERTWARE** 4/yes/no/A
(Great Waves)
*Another high-level program.*

## KEYBOARDS
### *For the Commodore 64*

**INCREDIBLE MUSIC KEYBOARD**
(Sight & Sound) $39.95
*Overlays the C-64. Inexpensive alternative for pre-teens.*

**COLORTONE KEYBOARD**
(Waveform) $39.95
*Membrane keys. Fun to slide around on. Lacks software.*

**MUSICMATE**
(Sequential) $99.00
*Has good keyboard feel. Software could be better, though.*

**SOUNDCHASER 64**
(Passport) $199.00
*The all-around best plug-in keyboard. Four octaves.*

**MUSIC PORT**
(Tech Sketch) $99.95
*Switch opens up possibilities for live performance.*

**MELODIAN KEYBOARD**
(Melodian) $129.95
*Organ-like feel. Works best with Rhythm Master.*

*(Note: Each keyboard works only with its own company's software.)*

converted to melodies and the colors determine the tones. Although it has achieved some popularity in educational circles, *Musicland* suffers from the Apple curse: it requires a $300 synthesizer card.

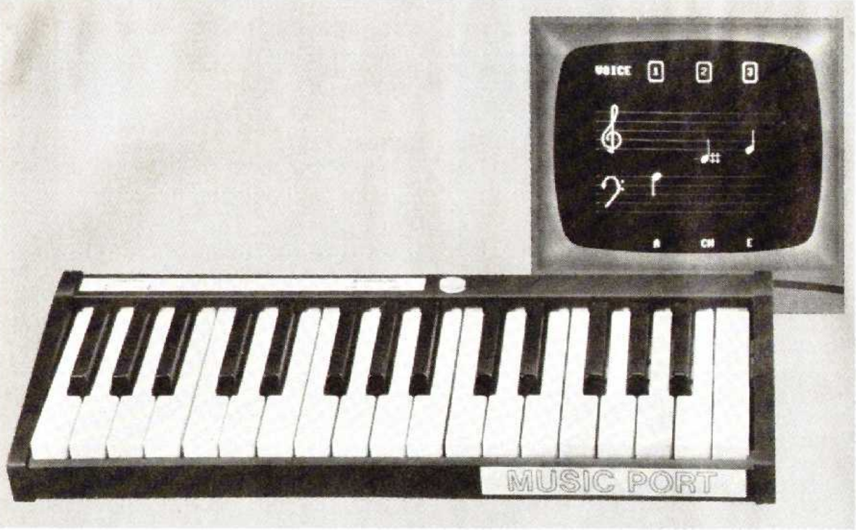
One of the most sought-after applications for any computer musician is a keyboard package. This has prompted no fewer than six companies to release inexpensive peripherals which plug directly into, or overlay onto, the C-64. Plastic overlay keyboards, such as Sight & Sound's *Incredible Music Keyboard*, and Waveform's gimmicky *Colortone Keyboard*, are only good for beginners and children. The best full-size keyboard comes from Passport. The *Soundchaser 64* features four octaves and standard piano keys, and has a good feel. Unfortunately, the accompanying software is not particularly easy to use.

Sequential's *MusicMate* is also satisfactory, even though it only has a two-and-a-half octave range. Sequential's software, however, is superior to Passport's. Although it is menu-driven, it works as you would expect a musical instrument to work — with simple efficiency and musical organization. The *MusicMate* could be used as an inexpensive synthesizer in a band.

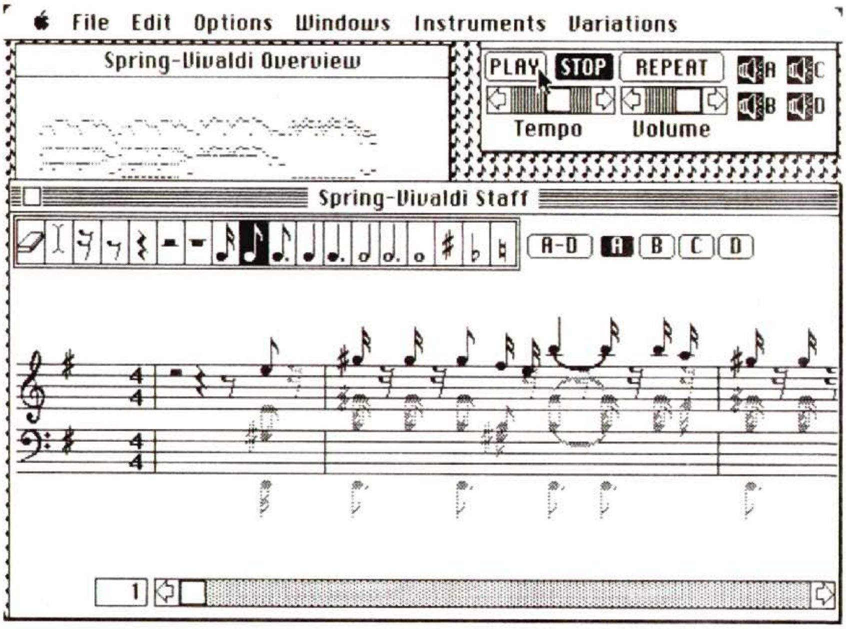
Incredible Musical Keyboard
Super Songs
Easiest Songs

Sight & Sound's keyboard and software.

The Melodian keyboard, when used with the *Rhythm Master* and *Concert Master* software, is particularly effec-



The Tech Sketch Music Port (above) opens up interesting musical possibilities; below, *MusicWorks* (Hayden), an excellent music program for the Mac.



tive for teaching sight reading and how to play in time. Tech Sketch's *MusicPort* has a push-button switch that adds to the basic two-and-a-half octave keyboard and, when used in conjunction with sequencing and transposing software, creates a new musical instrument with interesting possibilities. For example, you never have to leave the key of C while moving through chord changes.

Next month, I'll discuss more sophisticated (and expensive) music peripherals, and programs that utilize a Musical Instrument Digital Interface (MIDI). I'll give you the lowdown on Atari's rumored music computer that will supposedly rival the $1500 Yamaha DX-7 synthesizer. And you'll hear about a remarkable minicomputer at Stanford that can transcribe Mozart — by ear.

ce

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## ASCII

*Continued from page 40*

*"We think about our loved ones."*

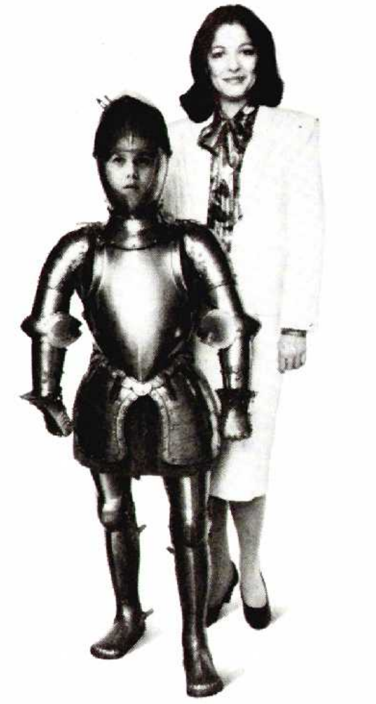
*There was no time left to wait. The ROMs were clawing at the tent, and growling loudly. I reached into my backpack and pulled out an EPROM. I turned it on the ROM pack, and the animals dispersed. We were saved. Thank God for modern technology.*

Another portion of Motherboard, "How Poetic," recently offered what is arguably the world's worst love poem. Since I'm about to log-off, it seems fitting to leave it with you as inspiration for your own bulletin board adventures:

*Do you love me*
*Or do you not*
*You told me once*
*But I forgot.*

ce

**How to keep your child away from drugs.**



Arming them in a suit of steel might help. But once they leave your home, they're really on their own.

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Learn to recognize the symptoms of drug abuse. Look for failing grades in school. And irrational behavior. But most importantly, keep your lines of communication open with your children.

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*Unitech, $149.95*

If you've been shopping for a modem lately, and could also use a new phone, consider getting both at once with Untech's 300-baud Modem Phone. It interfaces with most of the popular personal computers, such as the Commodore 64, Atari 850KL, IBM PC and PCjr, and the Apple IIs.

The TMS-1A automatically switches between originate and answer modes, redials last numbers and memorizes 10 numbers. Unitech will also soon release a 1200-baud Modem Phone (TMS-2A) that stores 20 numbers.

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*13327 Paxton*
*Pacoima, CA 91331*
*(818) 897-5800*

## G.E. PERIPHERALS

*General Electric*

One of the world's largest electronics manufacturers, G.E., has jumped into the computer peripherals market with the introduction of five products. The Models 3-8100 letter-quality printer ($299) is compatible with Atari and Commodore computers and the IBM PCjr when connected with G.E.'s interface ($89.95). It can print either 25 or 50 characters per second.

Closer to G.E.'s turf are the two switchable monitor/TVs being offered. The 13-inch color ($489.95) and 12-inch black-and-white ($129.95) monitors can display 80 characters per line and alternate between TV and monitor with the touch of a switch.

G.E. is also selling a 300-baud modem ($119.95) and a program recorder ($69.95) for use with Atari and Commodore computers.

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*Consumer Electronics*
*Business Operation*
*Syracuse, NY 13221*
*(800) 626-2000*

## PORTABLE BRIEFCASE SYSTEM

*Prairie Power Systems, $269.95*

If you own (or plan to buy) Apple's LCD Display Screen and make a habit of taking your IIc on the road, Prairie Power has a "briefcase system" for you. The system comfortably fits a IIc and LCD screen inside a padded, water-resistant case and comes with a 12-volt battery (which runs for about eight hours) and battery charger. Without adding your modem (which can be done), the system weighs in at 20 pounds. Don't leave home without it.

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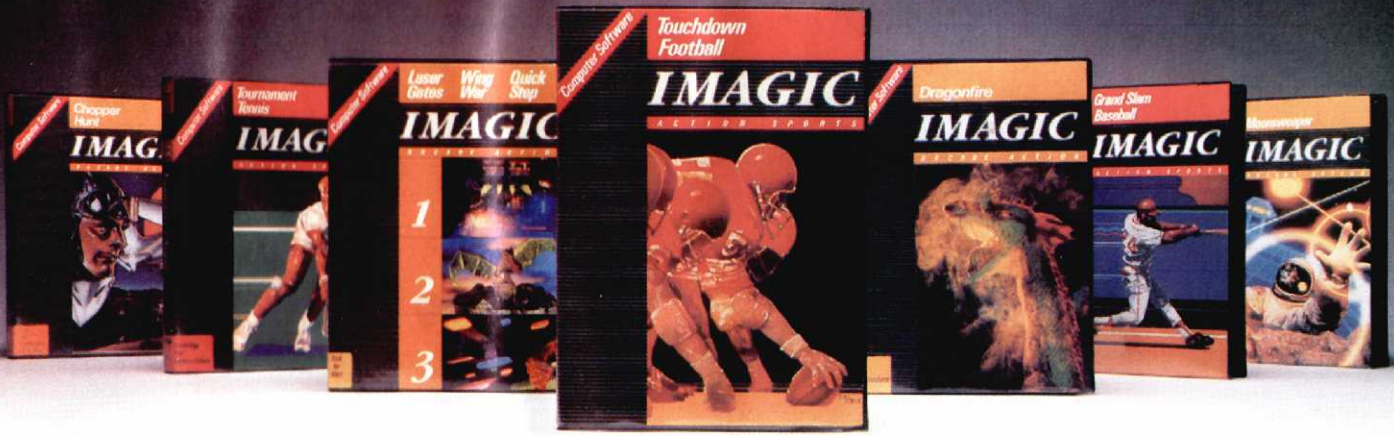
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Moonsweeper

## ACTION SPORTS

Touchdown Football

Tournament Tennis

Grand Slam Baseball

## ARCADE ACTION

Chopper Hunt

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IMAGIC 1-2-3

Moonsweeper

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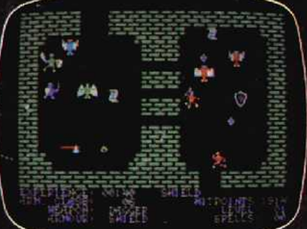
# Sword of Kadash™

## *. . . the whole brain game*

*It's not a shoot-'em-up . . . it's not fantasy role-playing . . . it's not an adventure. It's a fantasy action adventure that makes you use your whole brain . . . not just half of it.*

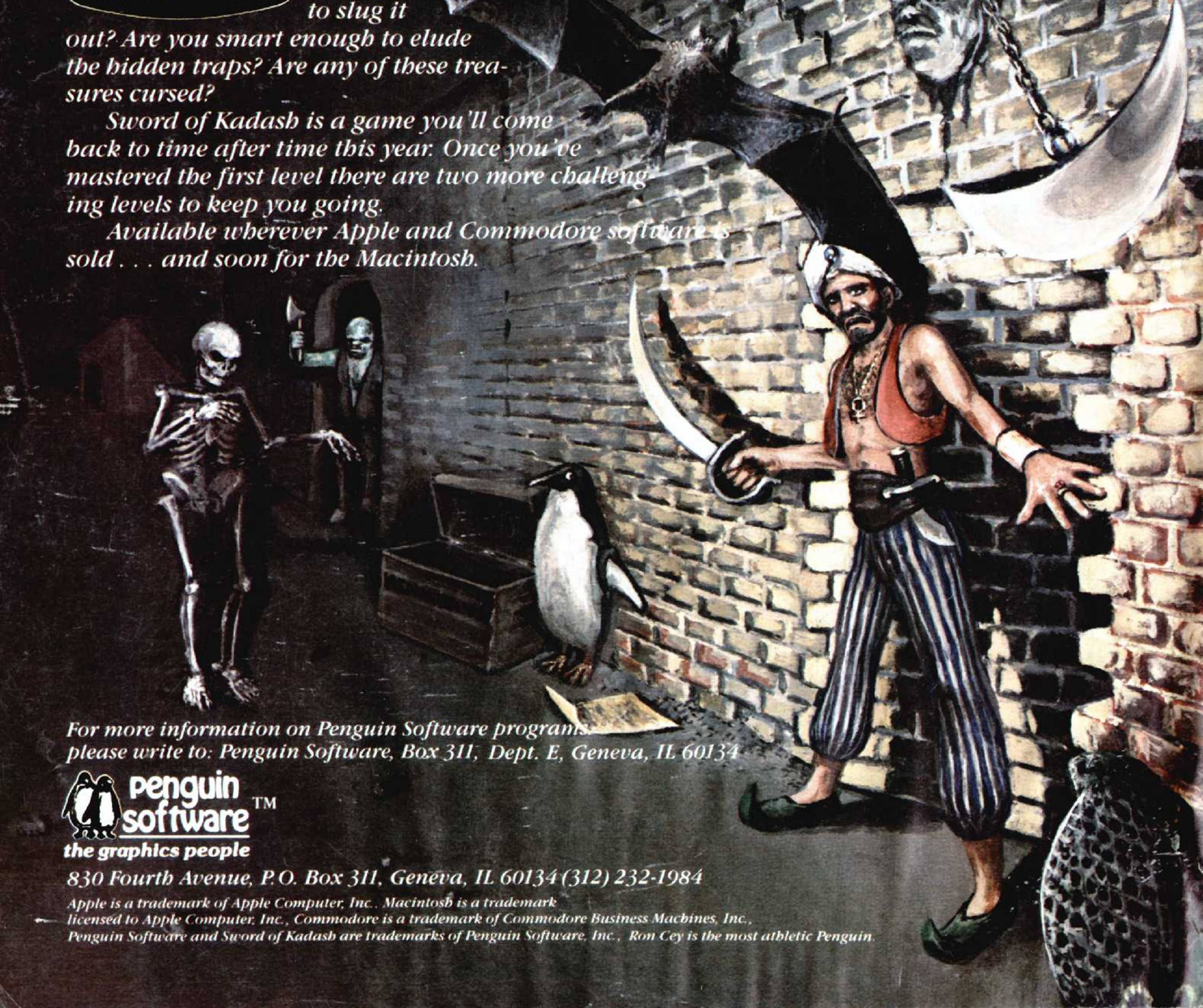
*Sword of Kadash is the most innovative new game of 1985. The reasons? Fast action. Characters to build. Traps and puzzles to reason out. More than 200 locations to map. In short, using your whole brain.*



*Consider the room shown here. On the right, Izniks and Kajari defend a scroll and a shield. On the left, Mukra, Naksh, and Gazik defend a scroll, a ring, and an axe. Are you fast enough to grab the treasures without fighting? Have you built your character strong enough to slug it out? Are you smart enough to elude the hidden traps? Are any of these treasures cursed?*

*Sword of Kadash is a game you'll come back to time after time this year. Once you've mastered the first level there are two more challenging levels to keep you going.*

*Available wherever Apple and Commodore software is sold . . . and soon for the Macintosh.*



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**the graphics people**

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